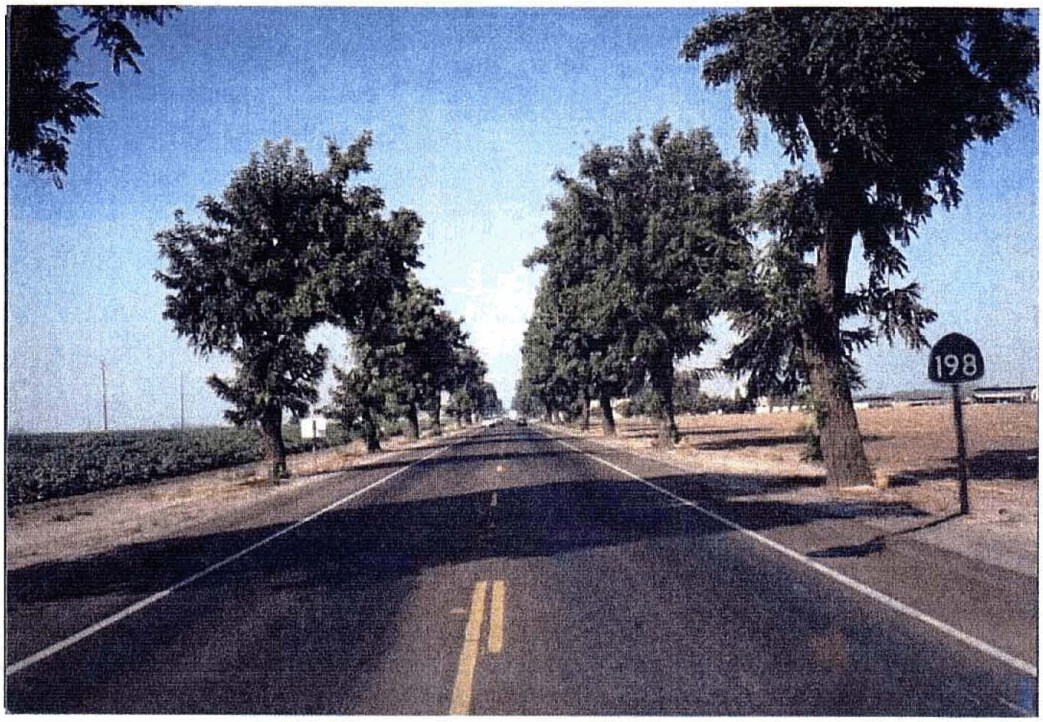
Kings & Tulare Counties SR 198 Expressway



Finding of No Significant Impact/Negative Declaration

On State Route 198 in Kings and Tulare Counties
From 0.8 kilometer (1.3 miles) east of State Route 43
To 0.6 kilometer (0.4 mile) west of State Route 99
06-KIN-198-KP 34.6/45.5 (PM 21.5/28.3)
06-TUL-198-KP 0.0/5.3 (PM 0.0/3.3)
06-3568UO

June *2003*

Caltrans Metric

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General Information About This Document

What's in this document?

This document is an Environmental Assessment/Initial Study (EA/IS), which examines the potential environmental impacts of alternatives for the project located in Kings and Tulare counties, California. The document describes why the project is being proposed, alternative methods for constructing the project, the existing environment that could be affected by the project, and potential impacts from each of the alternatives.

The Draft Environmental Assessment/Initial Study was circulated to the public from June 10, 2002 to August 2, 2002. No comments were received on the draft document during the circulation period. A vertical line in the outside margin of the text indicates changes made to the document since the draft document was circulated. This information supercedes and/or clarifies information contained in the Draft Environmental Assessment/Initial Study. Project Alternative 4 has been selected by the Project Delivery Team as the preferred alternative because it is both less disruptive to the environment and is the least expensive.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Vickie Traxler, San Joaquin Valley Analysis Branch, 2015 E. Shields, Suite 100, Fresno, CA 93726; 559-243-8244 Voice, or use the California Relay Service TTY number, 1(800) 735-2929.

FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT
FOR
State Route 198 Hanford Expressway
06-Kin, Tul-198 34.6/45.5, 0.0/3.3

The Federal Highway Administration (FHWA) has determined that the proposed widening of State Route (SR) 198 in Kings and Tulare Counties from SR43 in Hanford to SR99 near Visalia will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment (EA) and incorporated technical reports, which have been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. These documents provide sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required. The FHWA assumes responsibility for the accuracy, scope, and content of the attached EA and incorporated technical reports.

Maiser Khaled, Chief,
District Operations – North
California Division

6/12/03
Date

State of California
Department of Transportation

SCH Number: 2002061013
06-KIN-198-KP 34.6/45.5 (PM 21.5/28.3)
06-TUL-198-KP 0.0/5.3 (PM 0.0/3.3)

Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to improve 16.2 kilometers (10.1 miles) of State Route (SR) 198 by converting a two-lane conventional highway to a four-lane expressway between SR 43 and SR 99. Construction would occur from 0.8 kilometer (1.3 miles) east of SR 43 to 0.6 kilometer (0.4 mile) west of SR 99 in Kings and Tulare counties. Project Alternative 4 has been selected by the Project Delivery Team as the preferred alternative because it is both less disruptive to the environment and is the least expensive.

Determination

Caltrans has prepared an Initial Study, and determines from this study that the project would not have a significant effect on the environment for the following reasons:

- There would be no effects on social, cultural, or educational facilities, or to any publicly owned park or recreational area. No archaeological sites or historic properties would be affected. Planned land use would not change. The project would not affect local or regional air quality. The project does not constitute a significant longitudinal floodplain encroachment. Seismic hazards would not increase. Paleontology resources would not be affected.
- Potential impacts to water quality during construction would be mitigated through the use of Caltrans erosion control practices. Dust during construction would be controlled by compliance with air district regulations.
- Trees removed from the north side of the highway would be replaced. Additional trees would be planted on the south side to fill in existing gaps.
- Potential impacts to San Joaquin kit fox would be mitigated with the protective measures included in the environmental document.
- The project would result in the loss of 83.7 hectares (207 acres) of prime and unique farmland and 24.3 hectares (60 acres) of statewide and locally important farmland. However, since this represents approximately 0.036 percent of the total acres of agricultural land in Kings and Tulare counties, it is not a significant effect according to the Farmland Conversion Impact Rating.

Vickie Traxler — 6/19/03

Vickie Traxler
Chief, San Joaquin Valley Analysis Branch
Central Region Environmental Planning
California Department of Transportation

Date

Summary

Project Description

The California Department of Transportation proposes to improve State Route (SR) 198 in Kings and Tulare counties by converting the existing two-lane conventional highway to a four-lane divided expressway for 16.2 kilometers (10.1 miles) from 0.8 kilometers (0.5 miles) east of SR 43 near Hanford to 0.6 kilometers (0.37 miles) west of SR 99 near Visalia. The intersection of Road 68 and Route 198 in Tulare County would be separated with an overcrossing without ramps because the SR 198/SR 99 interchange is less than a half mile away.

Purpose and Need

The project would improve safety for motorists, correct nonstandard design features, accommodate increased traffic demands, and provide route continuity. By linking existing four-lane divided freeway segments at both ends, congestion can be eliminated and an acceptable traffic capacity provided through 2027.

The four-lane expressway would improve safety on this segment by separating eastbound and westbound traffic and providing a standard clear recovery zone between the roadway and the trees next to both sides of the highway. On the existing roadway, this clear recovery zone varies in width along this portion of SR 198. Accidents have been recorded involving motorists colliding with trees. The accident data also indicates that fatal accident rates for the Tulare County segment are above the statewide average, as are total accident rates at three of the existing intersections.

Project Alternatives

Four build alternatives are proposed to meet the purpose of improving safety and providing route continuity. All four build alternatives would widen the roadway to the north, add a median, and widen shoulders. Project alternative 4 has been selected by the Project Development Team as the preferred alternative because it is both less disruptive to the environment and is the least expensive. There is also a No-Build Alternative, which would not improve safety or relieve existing and future congestion in the project area. All project alternatives are defined in detail in Chapter 2.

Environmental Impacts

A Visual Impact Assessment determined that the view from the highway would be adversely affected by the removal of trees from the clear recovery zone on the north side of the roadway. Replacing the entire north side of SR 198 (as well as portions of

the south side) with a mixture of native oaks and walnut trees is recommended to mitigate the visual impacts.

Potential hazardous wastes identified in an Initial Site Assessment include: 1) aerially deposited lead adjacent to the roadway; 2) lead-based paint and asbestos on four structures; 3) underground and above-ground storage tanks; and 4) agricultural chemicals (including pesticides, fuel, solvents, oil, and grease) stored on agricultural properties. Preliminary Site Investigations would be performed to identify the presence and exact locations of these substances and determine whether or not remediation is necessary.

Most of the farmland in Kings and Tulare counties is protected under the Williamson Act. Although approximately 83.7 hectares (207 acres) of farmland would be acquired for new right-of-way, that amount of farmland comprises only 0.036 percent of the farmland in Kings and Tulare counties combined.

Two listed species, the San Joaquin kit fox and Swainson's hawk, may have suitable habitat within the project impact area. Surveys for these species identified San Joaquin kit fox two to five miles from the project impact area, but no Swainson's hawks. Therefore, a "may effect/likely to adversely affect" determination was made for the San Joaquin kit fox, and a "may effect/not likely to jeopardize" determination was made for the Swainson's hawk.

Mitigation/Remediation

Mitigation measures to minimize impacts to San Joaquin kit fox have been negotiated with the U.S. Fish and Wildlife Service during the formal consultation process. The mitigation measure agreed upon is land acquisition.

Remediation of hazardous waste may be required depending on the results of Preliminary Site Investigations for underground and above-ground petroleum storage tanks, as well as for agricultural chemicals encountered within the project limits.

Visual impacts will be mitigated by replanting native trees and other vegetation along the roadway.

Summary of Potential Impacts From Alternatives

Potential Impact		Alternative 1	Alternative 2	Alternative 3	Alternative 4	No Action Alternative
Land Use	Consistency with the Kings and Tulare County General Plans	Consistent with local land use plans.	Consistent with local land use plans.	Consistent with local land use plans.	Consistent with local land use plans.	No Change
Farmland		Requires acquisition of up to 207 acres of farmland.	Requires acquisition of up to 207 acres of farmland.	Requires acquisition of up to 207 acres of farmland.	Requires acquisition of up to 207 acres of farmland.	No Change
Social and Economic		No negative impact.	No negative impact.	No negative impact.	No negative impact.	No Change
Relocation	Business displacements	2	2	2	2	No Change
	Housing displacements	20	22	18	18	No Change
	Utility service relocation	4	4	4	3	No Change
Air quality		Does not worsen any existing conditions or create new violations.	Does not worsen any existing conditions or create new violations.	Does not worsen any existing conditions or create new violations.	Does not worsen any existing conditions or create new violations.	No Change
Noise		Requires no noise abatement.	Requires no noise abatement.	Requires no noise abatement.	Requires no noise abatement.	No Change
Waterways and hydrologic systems		Causes no long-term impacts.	Causes no long-term impacts.	Causes no long-term impacts.	Causes no long-term impacts.	No Change
Water quality		Causes no long-term impacts.	Causes no long-term impacts.	Causes no long-term impacts.	Causes no long-term impacts.	No Change
Wildlife		May impact habitat of two protected species.	May impact habitat of two protected species.	May impact habitat of two protected species.	May impact habitat of two protected species.	No Change
Floodplain		Would not greatly impact the watercourse or associated floodplain.	Would not greatly impact the watercourse or associated floodplain.	Would not greatly impact the watercourse or associated floodplain.	Would not greatly impact the watercourse or associated floodplain.	No Change
Threatened or endangered species		May impact habitat of two protected species.	May impact habitat of two protected species.	May impact habitat of two protected species.	May impact habitat of two protected species.	No Change
Historic and archaeological preservation		Would not impact cultural resources.	Would not impact cultural resources.	Would not impact cultural resources.	Would not impact cultural resources.	No Change

Hazardous waste sites	Potential impact to four possible hazardous waste sites.	Potential impact to four possible hazardous waste sites.	Potential impact to four possible hazardous waste sites.	Potential impact to four possible hazardous waste sites.	No Change
Visual	Temporary visual impacts to north side, trees on south permanently removed.	Temporary visual impacts to north side.	Temporary visual impacts to north side.	Temporary visual impacts to north side.	No Change

Permits and Agreements

Under Section 404 of the Clean Water Act, a Nationwide permit would be required for the wetlands impacts during construction of a new bridge over Cross Creek, as well as for crossings at four other small ditches and canals. A Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game would also be necessary for construction activity within the creek, and possibly for the other ditches and canals. Control measures for invasive species would also be required. Placement of fill material into these channels would require certification from the Regional Water Quality Control Board, according to Section 401 of the Clean Water Act. Caltrans would also obtain a statewide National Pollutant Discharge Elimination System permit, since more than two hectares (five acres) of soil would be disturbed. Notification to the San Joaquin Valley Air Pollution Control District would be required prior to demolition of any bridges or structures.

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List of Abbreviated Terms

ADT	Average Daily Traffic
APE	Area of Potential Effects
Caltrans	California Department of Transportation
CO	Carbon Monoxide
dBA	Decibels
FHWA	Federal Highway Administration
Ft	Foot/feet
ISA	Initial Site Assessment
Km	Kilometer(s)
KP	Kilometer Post
LOS	Level of Service
M	Meter(s)
Mi	Mile(s)
MOU	Memorandum Of Understanding
PM	Post Mile
PM 10	Particulate Matter 10 microns in diameter
RTP	Regional Transportation Plan
SIP	State Implementation Plan
SR	State Route
TSM	Transportation System Management

Chapter 1 Purpose and Need

1.1 Project Purpose

The California Department of Transportation (Caltrans) proposes to improve 16.2 kilometers (10.1 miles) of a two-lane conventional highway by converting State Route (SR) 198 to a four-lane divided expressway between SR 43 and SR 99 (Figure 1-1). Specifically, the construction area would extend from 0.8 kilometers (0.5 miles) east of SR 43 in Kings County to 0.6 kilometers (0.37 miles) west of SR 99 in Tulare County (Figure 1-2). The project would improve safety, correct nonstandard design features, accommodate increased traffic demand, and provide route continuity.

Within the project limits, the existing SR 198 roadway is a two-lane rural highway in a mostly agricultural area. Left-turn lanes have been constructed at Sixth and Seventh Avenues in Kings County and at Road 68 in Tulare County. Four-lane freeway segments exist east and west of the project area. Closing this gap on SR 198 is a high priority for local governments, and the project is included in both the Kings and Tulare Counties' General Plans.

To accomplish the purpose of the project, four build alternatives and a no-build alternative were studied. Each of the four build alternatives have the following elements in common:

- Construction of two additional lanes and a 25.8-meter (85-foot) median.
- Reconstruction of the existing roadway section, with 3.6-meter (12-foot) traffic lanes, 3-meter (10-foot) outside shoulders and 1.5-meter (5-foot) inside shoulders.
- Addition of frontage roads as needed to maintain access.
- Removal and replacement of all trees on the north side of the highway.
- Construction of an overcrossing at Road 68 in Tulare County.

All build alternatives would improve safety by increasing the existing shoulder width to current standards and by adding a median to separate eastbound and westbound traffic. Traffic flow would also be improved by providing route continuity and eliminating bottlenecks where traffic currently merges from four lanes into two. All build alternatives would accommodate increased traffic demand.

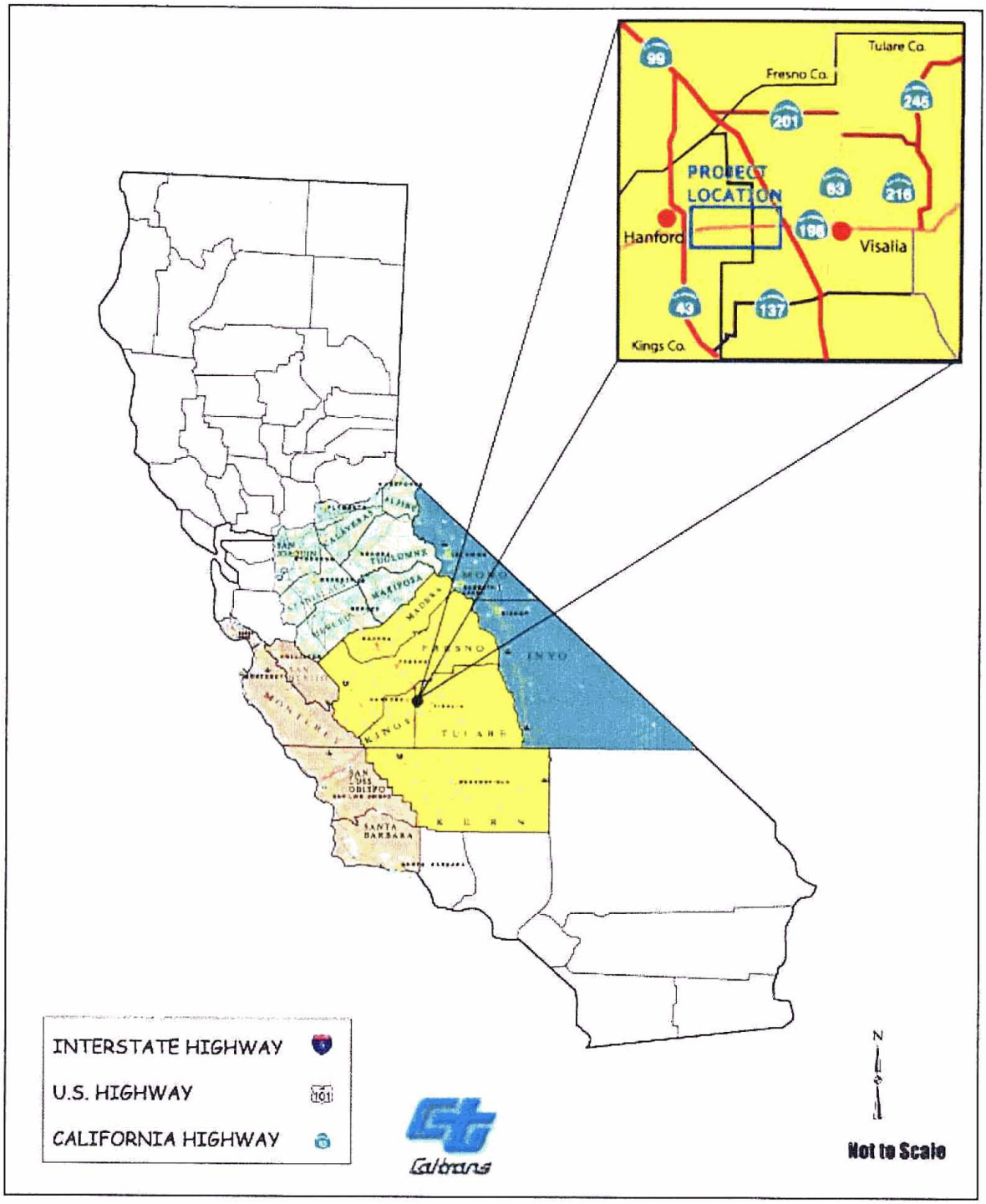


Figure 1-1 Project Vicinity Map

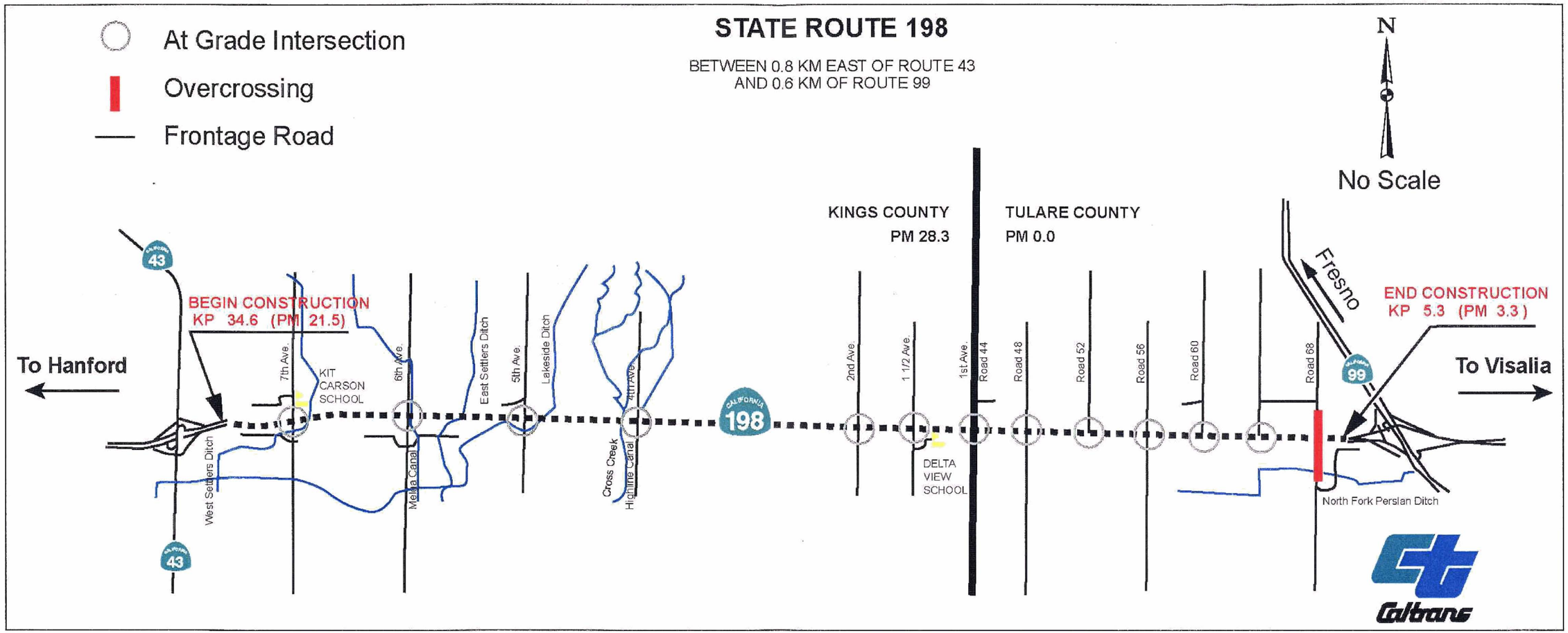


Figure 1-2 Project Location Map

The No-Build Alternative would leave the existing roadway as it is. The alternative does not address the purpose and need of the project. The Level of Service would continue to decline and accident rates would increase as traffic increases.

Each build alternative is discussed in detail in Chapter 2.

1.2 Project Need

State Route 198 is an interregional corridor that primarily serves the San Joaquin Valley, connecting the central coastal area of California to the Sierra Nevada Mountains. SR 198 is part of the National Highway System serving the cities of Coalinga, Lemoore, Hanford and Visalia. SR 198 is a designated large truck route between Interstate 5 and the Sequoia National Park boundary, per the Surface Transportation Authority Act of 1982. The importance of SR 198 as a local transportation route is apparent in Kings County, where it is considered to be an extension of Hanford's main street, Lacey Boulevard, and is known as Lacey Boulevard from east of SR 43 to the county line.

Land use in this region is largely agricultural in nature. Though rural, the route helps move people and goods throughout Kings and Tulare counties, as well as the state. There are several large dairy operations within the study limits and ownership acreage tends to be large, ranging between 400 and 800 hectares (roughly 1000 - 2000 acres). Two elementary schools are also within the study limits. Kit Carson School is located near the beginning of the project on Seventh Avenue, approximately 180 meters (600 feet) north of SR 198. Delta View School is located on the south side of SR 198, approximately 0.4 kilometer (0.25 mile) west of the Kings/Tulare county line.

Walnut and eucalyptus trees line each side of the highway through part of the project area. The trees were planted along the roadway in the early 1900's, and although they qualify as a scenic resource, they pose a potential safety hazard because of their closeness to the road. The line of trees in the Tulare County segment is more continuous than in the Kings County segment, where many of the trees have been removed.

1.2.1 Roadway Deficiencies

Within the project limits, the existing highway is a two-lane roadbed, 10.4 meters (34 feet) wide, with shoulders of varying widths. In the project area, this segment of SR 198 also lacks clear recovery zones on either side of the roadway. A clear recovery

zone is the distance from the edge of the road to the nearest object at the side of the road; it allows enough space for drivers to avoid obstacles or collisions if they are forced off the roadway. The project would provide a 25.8-meter (85-foot) wide median and the shoulders would be widened to expressway design standards. Additionally, a 9-meter (30-foot) clear recovery zone would be provided throughout the project limits.

1.2.2 Safety and Operations

As stated above, the project would improve safety on this segment of SR 198 by separating eastbound and westbound traffic and by providing clear recovery zones on both sides of the roadway. Between January 10, 1998 and January 9, 2002, a three-year safety analysis for this segment (and each of its intersections) examined actual vs. average accident rates for similar road sections throughout the State. The results of the analysis found that fatal accident rates on the Tulare County section exceeded the statewide average. Total accident rates at one of the eleven intersections exceeded the statewide average rate, and the "fatal + injury" accident rate exceeded the statewide average at two of the intersections. Accident rates are calculated per million vehicle kilometers traveled. Table 1.1 illustrates (in bold) the locations at which accident rates are above average for this segment:

Table 1.1 Accident rates per million vehicle kilometers traveled

Location	Actual			Average		
Highway Segment	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
Kings County, on SR 198 within project area	**0.039**	0.30	0.62	0.034	0.45	0.92
Tulare County, on SR 198 within project area	**0.028**	0.19	0.40	0.024	0.36	0.80
SR 198/Road 68 intersection	0.000	**0.25**	**0.51**	0.008	0.16	0.33
SR 198/Road 52 intersection	0.000	0.07	0.13	0.004	0.10	0.22
SR 198/6th Avenue intersection	0.000	**0.26**	0.32	0.008	0.16	0.33

Of the 106 accidents reported for the highway section, there were a total of 8 fatalities, 100 injuries, and 54 incidents of property damage.

1.2.3 Transportation Demand

The project segment of SR 198 will soon be reaching its capacity because of increased traffic demand. Within 20 years of completion of construction, Average Daily Traffic (ADT) in the Kings County portion of the project is expected to increase by 70 percent, while ADT in the Tulare County portion is projected to increase by 50 percent. The 2005 ADT and projected 2025 ADT are shown in Table 1.2.

Table 1.2 Projected Average Daily Traffic for Project Area, 2005 & 2025

County/Location	ADT (2005)	ADT (2025)
Kings County	16,400	28,500
Tulare County	16,200	24,900

The project limits encompass the only segment on State Route 198 that is not expected to provide the projected Level of Service in the year 2005. Level of Service (LOS) is an indicator of operating conditions on a roadway or at an intersection and is defined in categories ranging from "A" to "F" (Figure 1.3). LOS of "A" indicates free-flowing traffic with no hindrance to driving speed caused by traffic conditions, whereas LOS "F" indicates substantial congestion with slow-moving, stop-and-go traffic. The June 1989 Route Concept Report indicated that LOS deficiencies would occur within the project limits in the next ten years. The target LOS is "C" for a rural expressway. Without improvements, this segment is expected to deteriorate to LOS "D" in 2005 and "E by 2015.

Because the existing highway will not meet anticipated service needs, the Kings County Association of Governments and Tulare County Association of Governments have given the project high priority in their Regional Transportation Plans. It is listed as the No. 1 priority project in both counties' Flexible Congestion Relief Program. The project has also been included in the Governor's 2000 Transportation Congestion Relief Program. The proposed four-lane expressway would provide an LOS of B until 2015, and would not drop to an LOS of C until 2025.

LEVELS OF SERVICE

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptors
A		55+	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed. **No delays.**
B		50	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability. **No delays.**
C		45	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing. **Minimal delays.**
D		40	Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Less maneuverability and driver comfort. **Minimal delays.**
E		35	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort. **Significant delays.**
F		25	Forced traffic flow. Speed and flow may drop to zero with high densities. **Considerable delays.**

Figure 1-3 Levels of Service

1.2.4 Route Continuity

The project would widen and improve the condition of SR 198 in Kings and Tulare counties. Within the project limits, the existing highway is a two-lane roadbed, 10.4 meters (34 feet) wide. Currently, SR 198 from near Hanford to SR 99 is a two-lane highway segment between two four-lane freeway segments. This creates a bottleneck at both ends when traffic must merge from the four-lane freeway to the two-lane conventional highway.

1.3 Project Background

The purpose of the project is to improve safety for motorists, correct nonstandard design features, accommodate increased traffic demands, and provide route continuity. The project would meet this purpose by converting 16.2 kilometers (10.1 miles) of SR 198 from a two-lane conventional highway to a four-lane divided expressway, including a median and wider shoulders to comply with current state design standards.

Since the early 1980's, design concept studies have been completed as a joint undertaking with Caltrans and local agencies. In 1992, a Project Development Team was formed to develop a strategy to improve the project segment of SR 198. When the June 1989 Route Concept Report indicated that LOS deficiencies would occur within the project limits in the next ten years, this project became a priority with both the Kings County Association of Governments and the Tulare County Association of Governments.

A number of concepts have been considered in the past, but with the advancement of design standards, four alternatives remain. Concepts previously evaluated and withdrawn from consideration include an expressway on a new alignment or a full freeway. These ideas were rejected because they were extremely costly and unnecessary for the projected traffic demands.

Because the trees lining either side of SR 198 are enjoyed by area residents and property owners, Caltrans and the project sponsors decided early on to try to avoid impacts to the trees if possible. The proximity of the trees to the edge of the traveled way makes it impossible to leave both rows of trees untouched, but each proposed alignment minimizes the effects by making improvements only to the north and replanting or replacing trees along the northern edge of the new right-of-way.

Chapter 2 Alternatives

2.1 Alternative Development Process

Alternatives were developed to accomplish the project purpose as well as to minimize environmental impacts, meet State design standards, and minimize cost.

2.1.1 Alternatives Considered and Eliminated

A number of alternatives have been studied in the past, but were rejected for various reasons. The rejected alternatives include:

- Build a new expressway .25 mile south of the existing alignment. This concept is considerably higher in cost because of the additional cost of pavement, base, and earthwork needed for the construction of two additional lanes, as well as the additional cost of structures and culverts. It was estimated that this alternative would add $5,000,000 to the cost of the project.
- Build a full four-lane freeway. The cost of this concept would be much higher because of additional earthwork, pavement, interchange right-of-way, structures, and frontage roads. Although the ultimate route concept is a four-lane freeway, current and projected future traffic volumes (through 2018) do not justify the additional cost at this time.
- Widening to the south or a combination of widening to the north and south. This concept was studied extensively but abandoned because of considerably higher right-of-way and utility costs, especially the relocation of a Southern California Edison substation located south of SR 198 near Road 60.
- Relinquish the existing SR 198 and build four new lanes to the north. This alternative would avoid all utility relocations and preserve all the trees along SR 198. This alternative, however, lacked local support in Tulare County. In addition, it would result in much higher costs because of the need for more materials and structures. Because of the increased right-of-way required, the alternative would result in considerable farmland conversion and a potentially significant effect on kit fox, resulting in an impediment to kit fox crossing the roadway.

2.1.2 Alternatives Selected for Detailed Study

Alternatives were developed using four principal criteria:

1. impacts to trees
2. utility relocation
3. cost
4. design standards

The rows of trees lining either side of State Route 198 are important to area residents and property owners, so the agencies involved aimed to minimize impacts to the trees. Project alternatives were also selected to reduce the number of utility relocations. Another factor considered was project cost. A number of elements figure into a project's cost, including cost for structures, construction, and right-of-way. Over the years, project alternatives have been modified to incorporate new state design standards.

Four build alternatives and the No-Build Alternative have been selected for study. The alternatives are further described below. During the project's development, many alternatives have been analyzed. Using the four main selection criteria listed above, four alternatives were chosen for more detailed study.

2.2 Project Alternatives

Final selection of the preferred alternative was made after the full evaluation of environmental impacts, full consideration of public hearing comments, and approval of the final environmental document. Project Alternative 4 has been selected by the Project Development Team as the preferred alternative because it is both less disruptive to the environment and is the least expensive.

2.2.1 Alternative 1

Alternative 1 (Figure 2-1) would use part of the existing roadway for the new eastbound lanes. The centerline for the existing lanes would be shifted 1.2 meters (4 feet) to the north and the trees on the north and south sides of the highway would be removed. A 25.8-meter (85-foot) median would be constructed to separate the eastbound lanes from the westbound lanes, and new trees would be replaced on the north side, separated from the roadway by a standard 9-meter (30-foot) clear recovery

zone. Trees on the south side would not be replanted in order to maintain a 9-meter clear recovery zone while avoiding the cost of additional right-of-way. Frontage roads would be constructed as needed to provide access to all properties along State Route 198. Alternative 1 would preserve the at-grade intersections that currently exist along the route, with the exception of Road 68, which for safety reasons would become an overcrossing. Because Road 68 would no longer have direct access to State Route 198, a frontage road would be constructed between Road 68 and Road 64. The intersection on Road 64 and State Route 198 would also be improved to accommodate the increased traffic caused by the change of access. The cost for Alternative 1 would be approximately $69,600,000.

2.2.2 Alternative 2

Alternative 2 (Figure 2-2) would also use part of the existing roadway for the new eastbound lanes, but would shift the centerline 5 meters (16.5 feet) farther to the north to preserve the trees on the south side of the road. A clear recovery zone of 9 meters (30 feet) would be established between the trees and the roadway. Alternative 2 would also include a median width of 25.8 meters (85 feet), as well as new trees planted on the north side. Frontage roads would be constructed as needed to provide access to all properties along State Route 198. Alternative 2 would preserve the at-grade intersections that currently exist along the route, with the exception of Road 68, which for safety reasons would become an overcrossing. Because Road 68 would no longer have direct access to State Route 198, a frontage road would be constructed between Road 68 and Road 64. The intersection on Road 64 and State Route 198 would also be improved to accommodate the increased traffic caused by the change of access. The cost for Alternative 2 would be approximately $61,600,000.

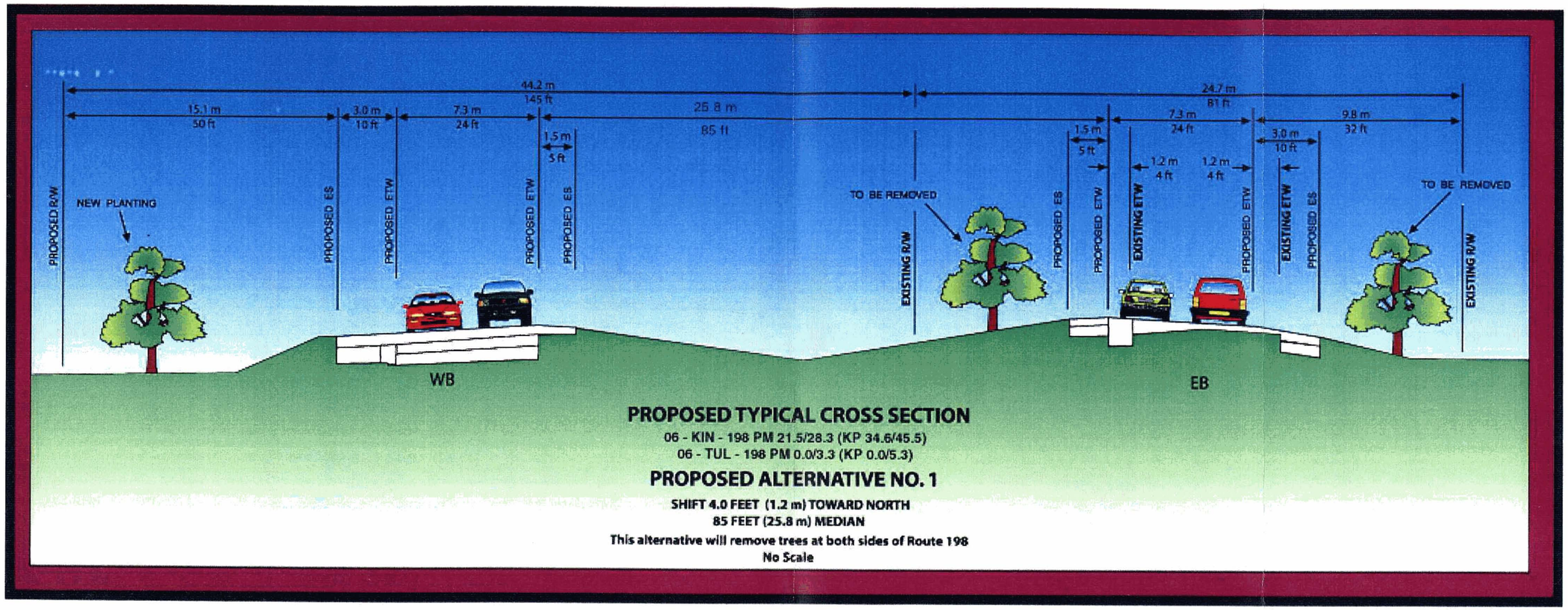
2.2.3 Alternative 3

Alternative 3 (Figures 2-3 and 2-4) would also shift the existing centerline 5 meters (16.5 feet) to the north, but only for the Tulare County section (Figure 2.4). The existing centerline on the Kings County section would be shifted only 3 meters (10 feet) to the north. The reason for this two-meter difference is that the trees in the Kings County section are farther from the existing road than those in the Tulare County section, therefore less room is needed to provide a 9-meter clear recovery zone (Figure 2-3). Trees on the south side of the highway would be preserved, and new trees would be planted on the north side. Like alternatives 1 and 2, a 25.8-meter (85-foot) median would separate the eastbound and westbound lanes. Frontage roads

would be constructed as needed to provide access to all properties along State Route 198. Alternative 3 would preserve the at-grade intersections that currently exist along the route, with the exception of Road 68, which for safety reasons would become an overcrossing. Because Road 68 would no longer have direct access to State Route 198, a frontage road would be constructed between Road 68 and Road 64. The intersection on Road 64 and State Route 198 would also be improved to accommodate the increased traffic caused by the change of access. The cost for Alternative 3 would be approximately $65,300,000.

2.2.4 Alternative 4

Alternative 4 (Figure 2-5) would shift the existing centerline 7.2 meters (23 feet) to the north. The existing right-of-way line on the south side of Route 198 would be moved 6.5 meters (21.5 feet) to the north. This would result in net savings of approximately $6,000,000 and avoid the relocation of a gas line. Trees on the south side of the alignment would not be affected and new trees would be planted on the north side. Frontage roads would be constructed as needed to provide access to all properties along State Route 198. Alternative 4 would preserve the at-grade intersections that currently exist along the route, with the exception of Road 68, which for safety reasons would become an overcrossing. Because Road 68 would no longer have direct access to State Route 198, a frontage road would be constructed between Road 68 and Road 64. The intersection on Road 64 and State Route 198 would also be improved to accommodate the increased traffic caused by the change of access. The cost of Alternative 4 would be approximately $60,300,000.



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Figure 2-1 Proposed Typical Cross Section – Alternative 1

Figure 2-2 Proposed Typical Cross Section – Alternative 2

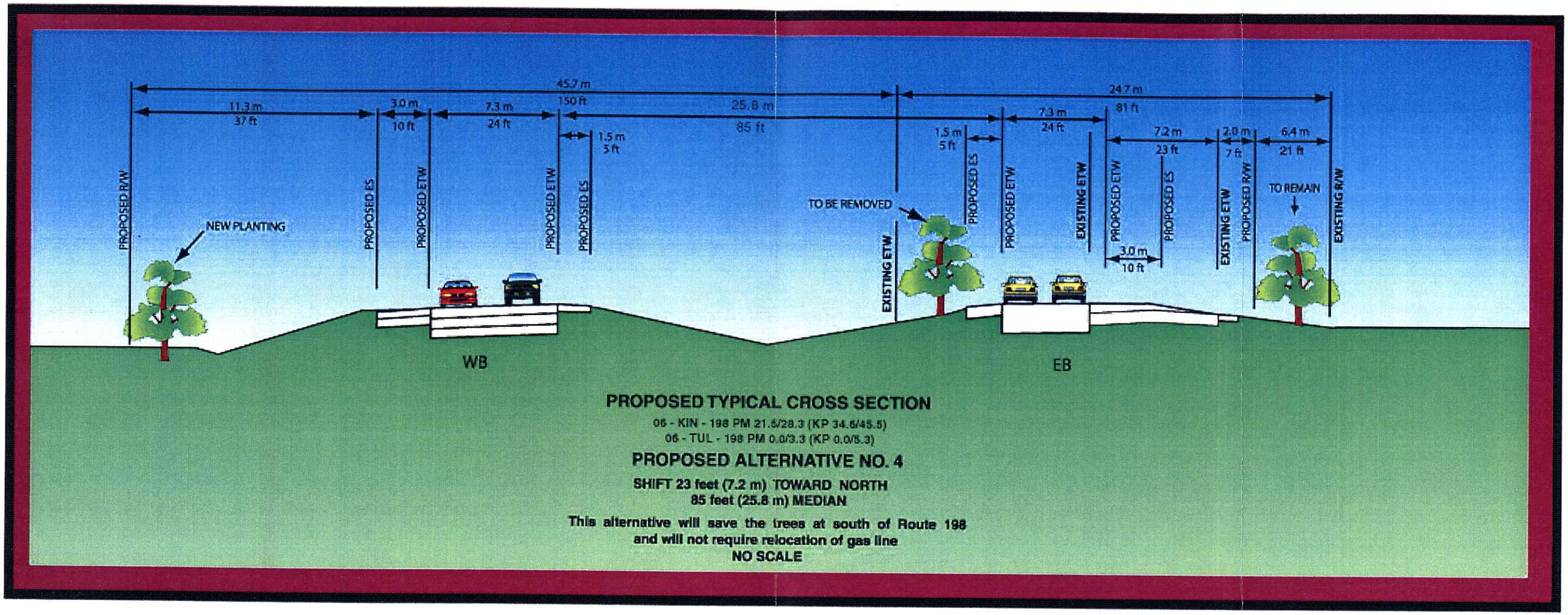
LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Figure 2-3 Proposed Typical Cross Section – Alternative 3, Kings County

LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Figure 2-4 Proposed Typical Cross Section – Alternative 3, Tulare County



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Figure 2-5 Proposed Typical Cross Section – Alternative 4

2.2.5 Similar Features of Build Alternatives

All build alternatives would include the following design elements:

- Construction of two additional lanes and a 25.8-meter (85-foot) median.
- Reconstruction of the existing roadway section, with 3.6-meter (12-foot) traffic lanes, 3-meter (10-foot) outside shoulders and 1.5-meter (5-foot) inside shoulders.
- Removal and replacing of all trees on the north side of the highway.
- Construction of an overcrossing at Road 68 in Tulare County.
- Addition of frontage roads as needed to maintain access.

Frontage roads would need to be constructed along the north and south sides of the project to maintain access. Locations of the frontage roads are illustrated in Figure 1-2 and are listed below.

In Kings County, frontage roads would be built:

- east of 7th Avenue on the north and south sides of SR 198
- east and west of 6th Avenue, south of SR 198
- east of 5th Avenue, north of SR 198
- west of $1^1/_2$ Avenue, south of SR 198

In Tulare County, frontage roads would be built:

- west of Road 44, north of SR 198
- east of Road 60, north of SR 198
- east of Road 68, north of SR 198
- west of Road 68, south of SR 198

In addition to the design elements listed above, each alternative would preserve the at-grade intersections that currently exist along the route, with the exception of Road 68. Because of the proximity to the interchange of State Route 99, state safety standards require Road 68 to be an overcrossing,

Existing bridges and culverts would require modification along the project area. The Melga Canal culvert, located just east of 6th Avenue in Kings County, would be extended to the north for each of the project alternatives. The crossing at Lakeside Ditch would be rebuilt; the existing culvert would be removed and a longer culvert would be installed. At Cross Creek, the existing bridge structure would be widened to

accommodate the wider proposed eastbound lanes. A second structure would be constructed for westbound traffic. The Highline Canal culvert would be extended to an appropriate length for the project.

Alternatives 1, 2, and 3 would add 43.5 meters (143 feet) of new state right-of-way to the north for most of the 10.1-mile length of the project. Alternatives 1, 2, and 3 would also require the relocation of four utilities within a 12-meter (40-foot) easement north of the new right-of-way. Alternative 4 would add an additional 46.5 meters (153 feet) of new State right-of-way, but only require a 9-meter (30-foot) utility easement because the gas line would be avoided, thus saving $6,000,000 in total project costs.

Alternative 1 would permanently remove the trees on the south side of SR 198, thus causing a more substantial visual impact requiring approximately $2,000,000 more than Alternatives 2 and 3 for replacement planting. Alternatives 2, 3, and 4 preserve the trees on the south side of the highway and maintain some of the existing aesthetic value. Local input from public meetings indicated support for preserving trees along the route. Both Alternatives 2 and 3 would include replacing trees on the north side, but Alternative 3 would shift the centerline of the existing lanes 2 meters (6.5 feet) less in Kings County than Alternative 2 and use more of the existing roadway. The use of existing roadway would result in cost savings of approximately $330,000 in materials.

Table 2.1 Comparison of Alternatives

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Median Width	25.8 m (85 ft)	25.8 m (85 ft)	25.8 m (85 ft)	25.8 m (85 ft)
New Right-of-way Required	43.5 m (143 ft)	43.5 m (143 ft)	43.5 m (143 ft)	46.5 m (153 ft)
Utility Corridor	12 m (40 ft)	12 m (40 ft)	12 m (40 ft)	9 m (30 ft)
Relocate Gas Line	Yes	Yes	Yes	No
Trees	North- replace, South-remove	North- replace South-no change	North-replace South-no change	North- replace South-no change
Estimated Cost	$69,600,000	$61,600,000	$65,300,000	$60,300,000

2.2.6 No-Build Alternative

The No-Build Alternative would leave the existing roadway as it is. Without improvements, the existing highway will not meet anticipated service needs and is expected to deteriorate to LOS "D" in 2005 and to LOS "F" by 2025. As traffic increases, accident rates on SR 198 in Tulare County and at two intersections in the project area would continue to exceed the statewide average. Increased congestion on two-lane highways may cause drivers to make increased passing maneuvers and unsafe movements. A divided highway would provide superior safety.

2.2.7 Transportation System Management Alternative

Transportation System Management (TSM) is a planning and operating process designed to reduce traffic congestion and to facilitate the flow of traffic in urban areas. The TSM process focuses on more efficient use of existing transportation systems and facilities. TSM aims to reduce demand for vehicle trips, especially during peak periods, by emphasizing short-range, low-cost improvements.

TSM is not applicable for this project for several reasons. First, the proposed expressway project is in a rural area, and there are no low-cost measures that can significantly increase capacity. Second, the traffic volume is expected to approximately double in the next 25 years. TSM measures cannot compensate for this rate of growth. Finally, TSM will not resolve the existing safety concerns with the corridor.

Transit is not a viable option to significantly reduce travel demand within this corridor. The low population densities within the cities of Lemoore, Hanford, and Visalia do not support an expansion of fixed route transit.

Chapter 3 Affected Environment, Environmental Consequences, and Mitigation

3.1 Land Use

Land use in this region is largely agricultural in nature. The general plans and zoning ordinances for Tulare and Kings counties support agriculture through policies and standards by precluding incompatible urban development within the agricultural areas.

3.1.1 Affected Environment

The setting of the project area is rural agricultural land situated between SR 99 to the east and the city of Hanford to the west. Dairies and perennial crops comprise the major use of land in the project area. Several large dairy operations are within the study limits and ownership acreage tends to be large, ranging between 400 and 800 hectares (roughly 1000—2000 acres). Visalia Municipal Airport is located southeast of the SR 99/SR 198 interchange.

Although some residences would be displaced, there are options for relocation in both rural and urban areas. As reflected in their respective general plans, the cities of Hanford and Visalia still retain adequate capacity for residential growth within their city limits. Also, this area is zoned for agriculture and many parcels are protected for this purpose under the Williamson Act. The project is not expected to promote unplanned growth in this area of Tulare or Kings counties.

3.1.2 Impacts

The project would result in an increase in capacity, and it is considered important to both counties and is included in both counties' general plans. While some segments of properties would need to be acquired, the associated businesses could remain functional and operative.

The Visalia Municipal Airport's area of influence extends into the project area. However, project structures would not exceed the height requirements established by the airport.

3.1.3 Mitigation

No land use mitigation is required because the project is consistent with state and local government plans and policies in the area. Caltrans will follow appropriate guidelines as defined in the land use compatibility guide provided by Visalia Municipal Airport.

3.2 Farmland

The Farmland Protection Policy Act and the National Environmental Policy Act require that before taking or approving any federal action that would result in conversion of farmland, the effects of the action must be examined using criteria set forth by these acts. The relative level of farmland impacts for highway projects is determined through the use of a Natural Resources Conservation Service Form AD-1006 (Appendix E). Eleven criteria are evaluated, including area characteristics, farming unit size, the availability of farm support services, the compatibility with existing agricultural use and the relative value of pre-converted farmland. When projects are evaluated using the form, a rating greater than 160 is considered to have a higher degree of impact and the affected properties are suitable for protection. When using this tool, project alternatives that have fewer farmland impacts must be considered.

3.2.1 Affected Environment

The number one industry in Kings County is agriculture, which provides a very significant economic base and Tulare County is the second leading producer of agricultural commodities in the United States. Therefore, agriculture is the backbone of the regional economy.

Under the California Land Conservation Act of 1965, commonly known as the Williamson Act, prime farmland parcels four hectares (ten acres) or larger can be protected with a contract to reduce unnecessary or premature conversion to urban uses. In Kings County, 288,979 hectares (714,075 acres) are protected under Williamson Act contracts. Tulare County has issued Williamson Act contracts for 446,816 hectares (1,104,094 acres). In the project area, approximately 80 hectares (200 acres) of new right-of-way would need to be released from Williamson Act contracts.

3.2.2 Impacts

The Farmland Conversion Impact Rating was calculated based on a 183-foot right-of-way acquisition to the north (which is the maximum proposed acquisition). When evaluated for potential farmland impacts by the Natural Resources Conservation Service, row crops, trees, and livestock were indicated as types of agriculture that could be affected. The project would affect approximately 108 hectares (267 acres), which equals 0.036 percent of the total farmland acreage in Kings and Tulare counties combined.

A score of 160 or greater on the Farmland Conversion Impact Rating requires protection under the Farmland Protection Policy Act; the project scored 151 points. Parcels that are covered by a Williamson Act contract would be allowed to maintain that contract even if the remaining parcel size is less than the required four-hectare (ten-acre) minimum. Because the property would be used for a public project, contract holders would not be penalized for relinquishing portions of their Williamson Act properties.

3.2.3 Mitigation

Because the Farmland Conversion Impact Rating for the project falls below the 160-point threshold, mitigation in the form of protection under the Farmland Protection Policy Act would not be required.

3.3 Social and Economic

Caltrans studied potential social and economic impacts to the project area. Concerns such as travel patterns and accessibility were also investigated to see how they would be affected by the project.

The project was developed in accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994. Executive Order 12898 directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. In addition to that executive order, Caltrans is committed to Title VI of the Civil Rights Act of 1964 (See Appendix C). The act provides that no person in the United States shall, on the grounds of race, color or

national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

3.3.1 Affected Environment

The project area is rural agricultural land and the population within the project area consists of dairy and agricultural property owners. Rural residential property owners and tenants also populate the project area. Farms, dairies, and agricultural residences are the major types of properties that would be affected by the project. These residences include houses of differing age, size, and value; residents are owners and renters of varying ethnicity. Population along the Route 198 corridor is dispersed since the project area is rural.

Two elementary schools, Kit Carson School and Delta View School, are located in the project area. Farms and dairies are also located along the project area, but there are no true "roadside" businesses, which depend on passing traffic for customers. In addition to the agriculturally based businesses in the project area, a local Portuguese radio station is located to the south of the project. Approximately 20 residences are located in the project area; some of these are inhabited by tenants, and some by the property owner.

The population in both Kings and Tulare counties and in the project area has increased in the last decade. Between 1990 and 2000, the population of Tulare County increased 20 percent, from 306,103 to 368,021. Kings County had a population increase of 45 percent, rising from 89,226 in 1990 to 129,461 in 2000. The project area increased in population by approximately 9 percent, from 11,540 in 1990 to 12,578 in 2000.

Residents of this area use State Route 198 as a main route to the neighboring communities of Hanford and Visalia. Local agricultural businesses use SR 198 to transport goods and livestock to and from the marketplace. State Route 198 is an integral route of mobility in this area.

A Public Information Meeting was held at Kit Carson Union School in Hanford, California, on April 21, 1999, during which comments and questions were submitted by those who attended. Primary concerns of attendees were safety, with particular respect to unsafe passing, and the closeness of trees to the roadway. Also identified as concerns were access issues and the replacement of the existing walnut trees that

border the roadway. At the public meeting, Jose Ruano, Senior Environmental Planner, was present to interpret for Spanish-speaking individuals. Public involvement will continue with the affected communities.

In compliance with new legislation regarding community impacts, Caltrans has researched the demographics of the project area. Under federal order, the State must avoid alternatives that disproportionately impact low-income or minority populations. To identify minority populations within the project area, the 1990 and 2000 census data for Kings and Tulare counties was compared to that of the project area. The population is homogeneous within the study area. These comparisons are depicted by the charts shown in Figures 3-1, 3-2, and 3-3.

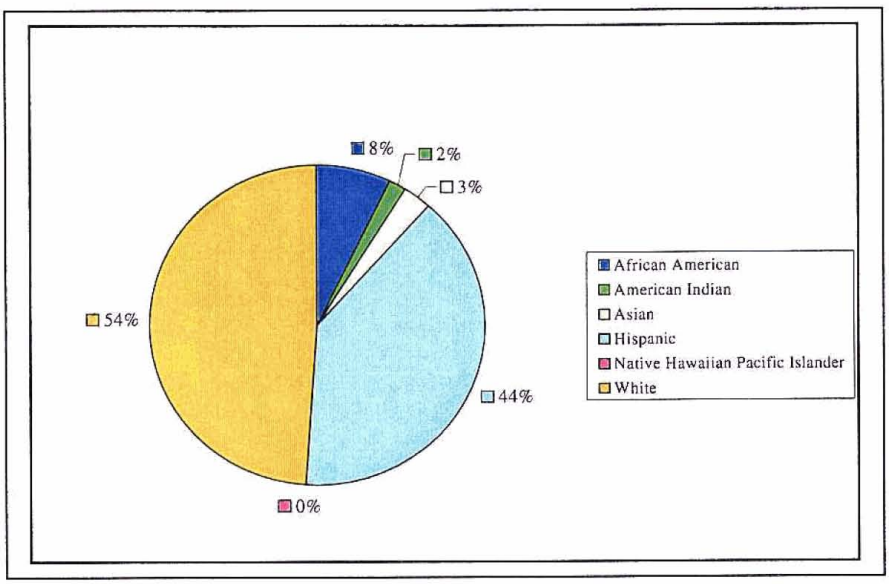


Figure 3-1 Ethnicity of Kings County

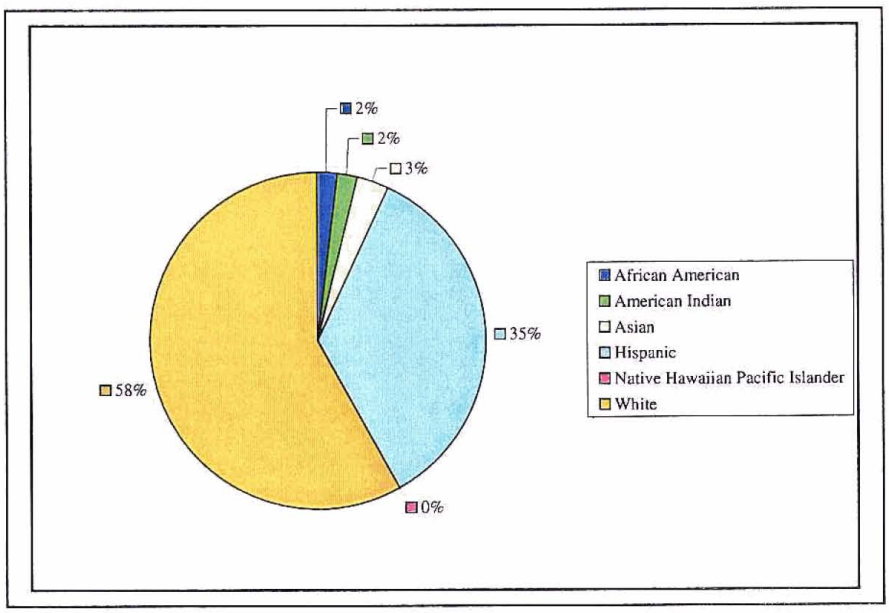


Figure 3-2 Ethnicity of Tulare County

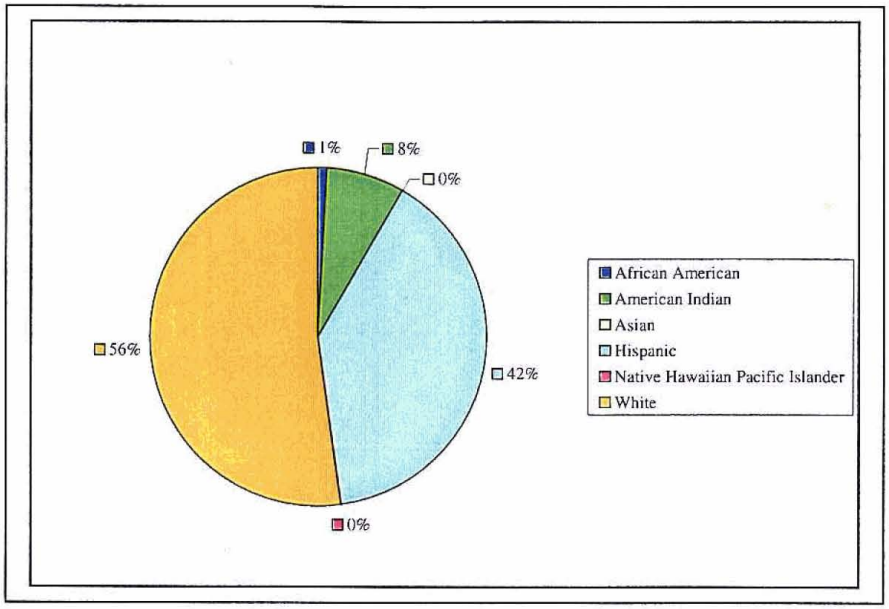


Figure 3-3 Ethnicity of Project Area

To identify low-income populations, the 1990 and 2000 census tract data were used to compare Kings and Tulare counties with the project area. According to the Department of Health and Human Services, the poverty line for 1990 is $12,674 for a family of four. Comparisons are depicted below in Figure 3-4.

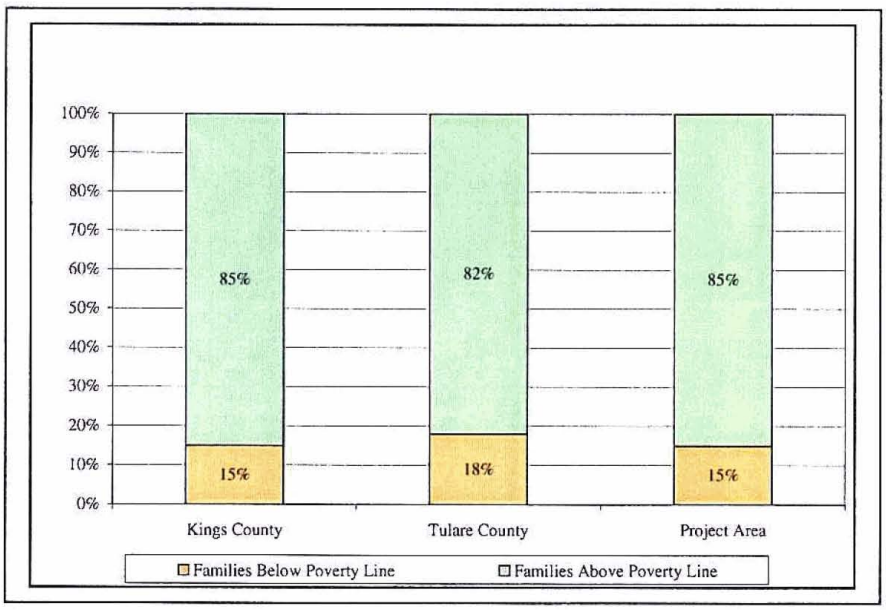


Figure 3-4 1990 Family Poverty Percentages

3.3.2 Impacts

Because of the rural nature of the project area, impacts to the dispersed local residents would be primarily positive. Safety would be improved by clear recovery zones and access control, which would make it both safer and more efficient to move people and goods. Fifteen residential owners and seven residential tenant families would be displaced by the project. Although several parcels would lose direct access to State Route 198, all alternatives propose to reroute access by the construction of frontage roads or driveways to the existing county roads.

Although a minority group resides within the project area, homes are so dispersed throughout the rural area that no coordinated community can be identified. As there is no community in the project area, community cohesion would not be affected. Also, no minority or low-income populations have been identified that would be adversely affected by the project as specifically required by Executive Order 12898 regarding environmental justice.

The project would improve efficiency of transport, which in turn would provide area farmers and businesses with a safer, faster route for the transportation of goods.

3.3.3 Mitigation

The project was designed to minimize adverse impacts to the residents in the project area. Identified impacts to the residents are primarily positive because the project would improve safety and traffic continuity. No minority or low-income populations have been identified that would be adversely affected by the project as specifically required by Executive Order 12898 regarding environmental justice. Aside from offering relocation assistance, mitigation is not necessary for social or economic impacts.

3.4 Relocation

A Draft Relocation Impact Study was completed to provide Caltrans, local agencies, and the public with information about the effects of the project on residential and non-residential occupants within the project impact area. The study addressed potential problems caused by the displacement of existing structures and their occupants. Additionally, the Draft Relocation Impact Study identified all residential and non-residential units within the displacement area of each proposed build alternative. The study included descriptions of structure characteristics, population

characteristics, and type of occupants, along with descriptions and availability of residential and non-residential relocation units.

The assessment was based on field observations, interviews with real estate professionals, and secondary source information. Personal interviews with residential and non-residential occupants have not yet been conducted. Specific relocation requirements for a selected alternative will be included in the Final Relocation Impact Study. Interviews will be conducted with each affected property owner and tenant before acquisition proceedings begin.

3.4.1 Affected Environment

Over the past ten years, the population growth of Kings and Tulare counties has strained the capacity and safety of SR 198 with higher traffic volumes, reflecting the interregional nature of traffic using the corridor and proving the need for additional capacity. Widening to the south would have disproportionate relocation expenses and would require relocation of an elementary school. Widening to the north of the existing alignment would necessitate acquisition of additional right-of-way. The estimated additional right-of-way needed (for two additional lanes, median, shoulders, clear recovery zone and replacement planting) is a section of land spanning approximately 43.5 meters (143 feet) north of the existing right-of-way for 16 kilometers (10 miles). Additionally, 9 to 12 meters (30 to 40 feet) for utility easements would be required, for a total area of approximately 16 to 20 hectares (40 to 50 acres).

The majority of properties acquired for right-of-way for the project would be rural agricultural land, dairies and agricultural residences. The residences located within the displacement area were built between the 1940s and the 1970s, with conditions ranging from dilapidated to adequately maintained. The average residence is a two- or three-bedroom home with one bath. The properties are designated primarily for agriculture and are zoned accordingly.

All relocation assistance would be provided with no discrimination as accorded by the Uniform Relocation Act, as amended. Secondary housing resources available in the surrounding communities, including Visalia, Tulare and Hanford could be considered.

3.4.2 Impacts

Depending on the chosen alternative, between 38 and 42 buildings within the project area would be affected. The majority of those structures could be relocated if requested by the property owner. Eighteen accessory structures, including carports and toolsheds, would be acquired as part of the land at fair market value, but would not be eligible for relocation. The people and properties that require relocation include 15 residential owners, seven residential tenants, and two businesses. The two businesses include an abandoned gas station and a home-based enterprise located in a mobile home. Structures on agricultural land may be moved on the same property or to another parcel that is owned and operated by the same farming operation.

As a result of the project, commercial farms would experience the greatest acquisition of land, although in many cases structures would not need to be relocated. Typical operations in the displacement area include dairies, row crops, orchards, and pastureland. There are a number of incidental structures serving as shops and storage facilities, which are part of the commercial farming operations. A number of these structures would be removed or relocated during property acquisition.

All proposed build alternatives currently under consideration would require the displacement of homes. An estimated number of displaced units are summarized in Table 3.1. It was concluded that there are adequate replacement resources for each displaced resident.

Table 3.1 Total Project Displacements

Type of Unit	Number of Displacements			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Residential owners	14	15	12	12
Residential tenants	6	7	6	6
Mobile Homes	(1)*	(1)*	(1)*	(1)*
Commercial	2	2	2	2
Industrial	0	0	0	0
Agricultural	0	0	0	0
Accessory Structures	18	18	18	18
Total Units	**40**	**42**	**38**	**38**

* The one mobile home displaced is utilized as one of the two commercial uses and is included as part of the *commercial* unit count.

Businesses that would be affected by the project are primarily commercial farming operations, which are zoned for agricultural uses. Several of these commercial farming operations also include farm residences, as well as rental housing for farm laborers. An adequate number of buildings and appropriate zoning currently exists for relocation of any business-related uses displaced by the project.

3.4.3 Mitigation

Adequate relocation resources exist for businesses, residential owners, and residential tenants. The "relocation resource area" as defined for the project consists of the cities of Visalia and Hanford, along with the unincorporated areas of the two counties. Relocation areas are comparable in terms of amenities, public utilities, and accessibility to public services, transportation, and shopping. The State relocation program is adequate to successfully relocate all individuals displaced by the project. Approximately 18 months would be necessary to complete the relocation effort.

3.5 Air Quality

The project is located in the San Joaquin Valley air basin. According to federal and state standards, this area is an attainment area for carbon monoxide (CO), and non-attainment area for ozone and particulate matter (PM 10 or dust). Attainment means that a region is in compliance with established limits for emissions. Non-attainment

refers to emissions that exceed established thresholds. A qualitative consideration was given to the build alternatives' effect on existing and new PM 10 violations at the microscale level.

3.5.1 Affected Environment

The San Joaquin Valley climate is classified as a subtropical dry summer or Mediterranean climate. Seasonal variation consists of mild winters and warm summers dominated by a persistent high-pressure system known as the Pacific High. This high-pressure system, combined with the confining effect of the mountains that surround the valley, keeps air from moving through the region, making the valley one of the most polluted regions in the country.

3.5.2 Impacts

Given the build alternatives' characteristics and location, as well as efforts and plans to attain the PM 10 standard, it is determined that the project would not worsen any existing PM 10 violation or create a new PM 10 violation. In addition, the project would not worsen any existing CO condition or create a new CO condition.

The project is included in the Tulare County currently conforming 1998 Regional Transportation Plan and the Kings County currently conforming 1999 Regional Transportation Plan. It is also included in the 2000 Federal Transportation Improvement Program. The Tulare County RTP was found to conform to the applicable State Implementation Plan for air quality by FHWA and the Federal Transit Authority on July 16th, 2001. The Kings County RTP was found to conform to the applicable State Implementation Plan for air quality by FHWA and the Federal Transit Authority on December 16th, 1999. The design concept and scope of the project is consistent with that assumed in the regional emissions analysis for the RTPs and the TIP. The project does not interfere with the timely implementation of transportation control measures in the applicable SIP.

3.5.3 Mitigation

Regulations established by the San Joaquin Valley Unified Air Pollution Control District to reduce dust emissions during construction would be followed.

3.6 Noise

Noise abatement measures must be considered for federal-aid highway projects when there is a potential increase in noise levels resulting from an increase in the number of lanes. According to the Traffic Noise Analysis Protocol (1998) as approved by FHWA, a considerable noise increase occurs when:

- Noise levels increase by at least 12 decibels (dBA) over existing levels, or
- The predicted noise levels approach or exceed the Noise Abatement Criteria established by the Federal Highway Administration (Table 3.2). The Noise Abatement Criterion for the sensitive receptors in the project area is 67 dBA.

Additionally, the California Streets and Highways Code Section 216 (Control of Freeway Noise in School Classrooms) requires noise abatement measures be implemented if levels exceed 52 dBA in classrooms.

3.6.1 Affected Environment

Two schools and 23 residences are sensitive receptors for noise in the project area (Figure 3-5). Noise measurements taken at each of these locations revealed a range of 61-69 dBA. Under current conditions, 12 receptors met or exceeded the Noise Abatement Criterion of 67 dBA. Noise abatement (soundwalls) may be constructed if it is reasonable and feasible according to Federal Highway Administration guidelines. This means soundwalls must result in a reduction of at least 5 dBA and be cost-effective.

Table 3.2 Activity Categories and Noise Abatement Criteria

Activity Category	NAC Hourly A-weighted Noise Level, Leq (dBA)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where it is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sports areas, parks, motels, hotels, schools, churches, libraries and hospitals.
C	72 Exterior	Developed lands, properties or activities not included in categories A or B above.
D	-	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, libraries, hospitals and auditoriums.

3.6.2 Impacts

A Traffic Noise Analysis was conducted for the 25 sensitive receptors, which may be affected if noise levels substantially increase. The analysis did the following:

- Identified noise-sensitive receptors such as residences, parks, churches, schools, libraries, and hospitals
- Determined existing noise levels at the sensitive receptors
- Modeled future noise levels with electronic equipment
- Determined if noise abatement measures were reasonable and feasible

As a result of the project, the predicted increase in noise ranges from 1- 4 dBA, depending on the receptor. Twelve of the 25 receptors studied would approach or exceed the Noise Abatement Criterion of 67 dBA for residences and schools.

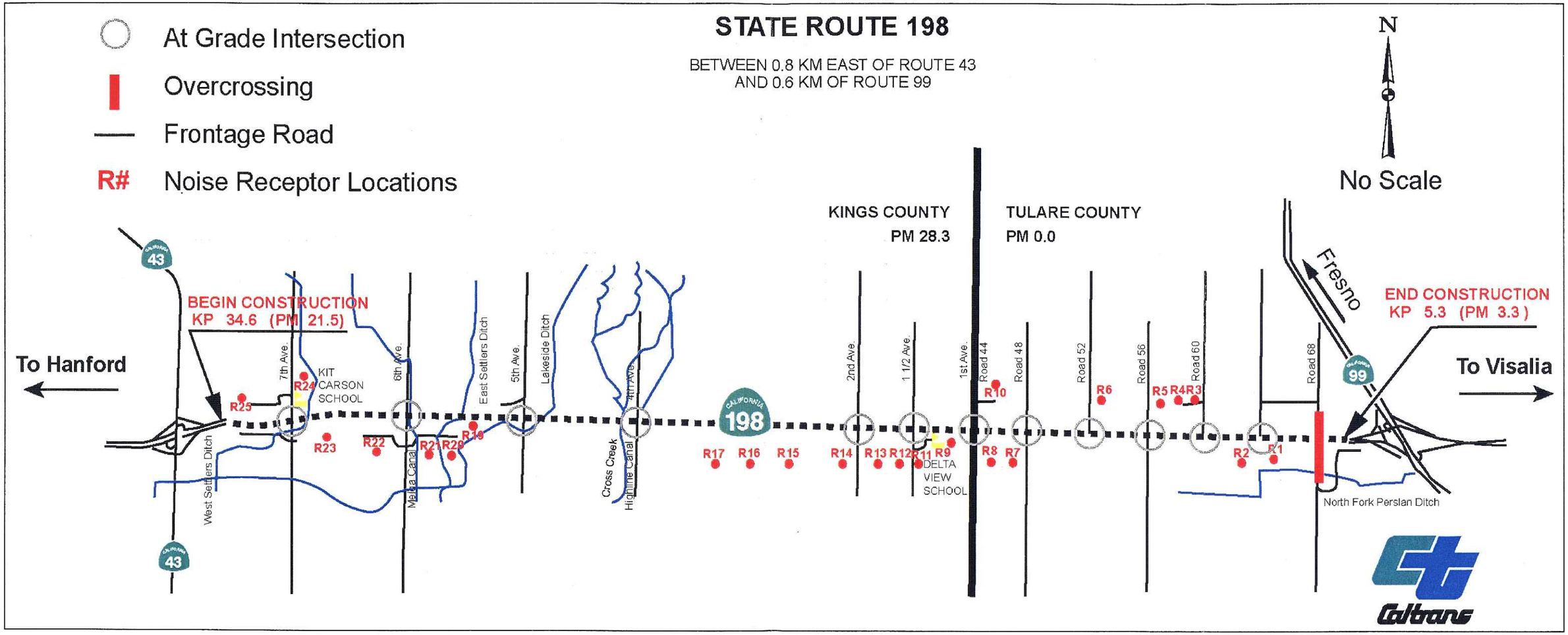


Figure 3-5 Map of Locations of Sensitive Noise Receptors

3.6.3 Mitigation

Noise abatement measures (soundwalls) were considered for the 12 receptors that would approach or exceed 67 dBA. However, the projected decrease in traffic-generated noise resulting from soundwall installation only amounted to 1-3 dBA. Federal Highway Administration guidelines mandate a minimum reduction of 5 dBA for noise abatement to be feasible, because this is the minimum reduction perceptible to the human ear.

Based on the modeling of future noise impacts at the two schools, the noise levels inside the classrooms are not expected to exceed the 52-dBA threshold required for noise mitigation. Therefore, noise abatement would not be recommended for the project.

3.7 Hydrology and Water Quality

The general topography of the project area is typical of the flat plains of the San Joaquin Valley. The downward slope of the land is westerly becoming southwesterly as one proceeds west along the project limits. Waterways within the project boundaries include Cross Creek, Settlers Ditch, Melga Canal, Lakeside Ditch and Highline Canal. A water quality investigation was performed for the project in accordance with Title 40, Part 122 of the Code of Federal Regulations. This states in part that a National Pollutant Discharge Elimination System permit is required for all projects that disturb more than two hectares (five acres).

3.7.1 Affected Environment

Several dairy properties are located within the project area. The Porter-Cologne Water Quality Act considers dairies to be generators of wastes that may contaminate groundwater. Wastes produced by dairies in the area include manure and solids, which are high in nitrogen, ammonia, urea, and salts.

3.7.2 Impacts

The Water Quality Control Board requires dairy farmers to manage animal wastes onsite and prevent them from contacting surface water and groundwater while exiting the dairy property. Right-of-way acquisitions from dairy properties may compromise compliance with requirements for dairy waste management. However, no long-term

impacts to water quality would be expected, assuming that the project is constructed with strict adherence to water-pollution control standards.

3.7.3 Mitigation

Under Section 404 of the Clean Water Act, a Nationwide permit would be required for the construction of a new bridge over Cross Creek, and possibly for crossings at four other small ditches and canals. A Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game would also be necessary for construction activity within the creek. Control measures for invasive species would also be required. Placement of fill material into these channels would require certification from the Regional Water Quality Control Board, according to Section 401 of the Clean Water Act.

Coordination with the Central Valley Regional Water Quality Control Board would be necessary to ensure that any actions follow the appropriate guidelines.

Because more than two hectares (five acres) of land would be disturbed, a National Pollution Discharge Elimination System permit would be obtained. This permit requires coordination with the Regional Water Quality Control Board to insure that water quality is not compromised by the discharge of any pollutants into bodies of water during construction. The permit states the following:

1. A Notification of Construction shall be submitted to the appropriate Regional Water Quality Control Board at least 30 days prior to the start of construction. The tentative start date, tentative duration, location of construction, description of the project, an estimate of the number of affected acres, resident engineer in charge of the project, and the telephone number of the resident engineer shall be reported.

2. A Storm Water Pollution Prevention Plan is to be prepared and implemented during construction to the satisfaction of the resident engineer.

3. A Notice of Completion shall be submitted to the Regional Water Quality Control Board upon completion of construction and stabilization of the site. A project will be considered complete when the criteria for final stabilization in the Construction General Permit is met.

Potential impacts to water quality during construction (such as erosion, accidental spills of hazardous material, and disruption of natural drainage patterns) should be

addressed in both the design and construction phases. In the design phase, plans would need to be made to ensure that there will be no detrimental discharge into any bodies of water. In the construction phase, the contractor has the responsibility to take the necessary steps in eliminating potential impacts to water quality during construction. If adequate measures and precautions are taken, the project would not adversely affect the water quality in the project area. Permits administered by the US Army Corps of Engineers, which regulates actions resulting in dredge and fill may also be required.

3.8 Wetlands

Caltrans biologists located a potential wetland within Cross Creek. A wetland is an area that has been inundated or saturated by surface or groundwater so that vegetation typically adapted for life in saturated soil conditions can thrive. The wetland is not natural; it has been formed by agricultural "tailwater" runoff from neighboring farms. According to Army Corps of Engineers, if the tailwater source fails to supply water to the wetland for two years and wetland conditions disappear, the wetland would not be considered jurisdictional.

3.8.1 Affected Environment

The wetland covers an approximately 0.2-hectare (.5-acre) area within Cross Creek. Construction of the project could impact approximately 0.04 hectare (0.1 acre) of the wetland due to bridge piles and shading effects.

3.8.2 Impacts

The potentially jurisdictional wetland area may be affected by construction of the westbound bridge. Approximately one year before construction begins, Caltrans would request a Nationwide permit from the Army Corps of Engineers. If wetland characteristics exist after two years, impacts to the wetland will be included in the Nationwide permit. Caltrans would mitigate the impacts.

3.8.3 Mitigation

To mitigate the potential impacts to the wetland within Cross Creek, Caltrans may create a wetland in close proximity of the impacted wetland. Mitigation measures regarding the wetland will be defined during the permit application process. The

permit application will be submitted to the Army Corps of Engineers approximately one year before the start date of construction.

3.9 Wildlife

Caltrans completed a Natural Environment Study and Biological Assessment for the project. This report was prepared to provide information that is needed to comply with a variety of state and federal laws, regulations and Executive Orders relating to the natural environment. Potential effects on natural resources, including federal and state special-status species and their habitats, were analyzed.

3.9.1 Affected Environment

The habitat types identified within the project area were ruderal and agricultural. Ruderal habitats are areas that have been greatly altered from their natural state, primarily due to practices that require the removal of native vegetation and plowing. Within the project area, ruderal habitat occurs along unpaved highway shoulders and weedy areas around buildings and between residences. Open (uncultivated) fields are also classified as ruderal habitat. Much of the cultivated agricultural land consists of row crops and walnut orchards. Cultivated orchards provide poor habitat for most terrestrial wildlife because of disturbance from mechanical harvesting, pesticide application, regular watering regimes, and burning.

The maximum acreage that would be permanently affected for all build alternatives is approximately 108 hectares (267 acres). This includes the additional right-of-way, utility easements, and frontage roads.

3.9.2 Impacts

Two listed species have the potential to occur in the project area: the state and federally endangered San Joaquin kit fox *(Vulpes macrotis mutica)* and the state threatened Swainson's hawk *(Buteo swainsonii)*. A "may effect/likely to adversely affect" determination was made for the San Joaquin kit fox and a "may affect/not likely to jeopardize" determination was made for Swainson's hawk. To minimize impacts to the Swainson's Hawk, pre-construction surveys would be required.

3.9.3 Mitigation

Mitigation measures as required for impacts to San Joaquin kit fox would be implemented in consultation with the United States Fish and Wildlife Service. Caltrans will adhere to the terms and conditions of the Biological Opinion from the United States Fish and Wildlife Service. The mitigation measures for San Joaquin kit fox are further described in section 3.11.3.3 of this document.

3.10 Floodplain

A Location Hydraulic Study using National Flood Insurance Program maps was done in the project area to analyze potential impacts to the floodplain. The study was performed in accordance with Title 23, Part 650 of the Code of Federal Regulations.

3.10.1 Affected Environment

The 100-year base floodplain currently crosses the project area at Cross Creek. The floodplain encroachment exists along SR 198, extending approximately 335.3 meters (1100 feet) west from Highline Canal. Another encroachment exists along SR 198, extending approximately 853 meters (2800 feet) east from Highline Canal. The project area is protected from the 100-year base flood by levees and other structures that are subject to possible failure or overtopping during larger floods.

3.10.2 Impacts

The project would not significantly affect the natural watercourse or the floodplain associated with this watercourse. The existing drainage patterns would continue unaltered and no major impact to the hydrology of this area would occur.

3.10.3 Mitigation

No mitigation is required since the project would not affect the natural watercourse, the floodplain, or existing drainage patterns.

3.11 Threatened and Endangered Species

The pre-survey investigation consisted of reviewing databases and obtaining lists of special-status species that may occur in the project area. A comprehensive species list was compiled using information provided by the U.S. Fish and Wildlife Service

(Appendix D), the California Natural Diversity Database, and the California Native Plant Society Electronic Inventory.

3.11.1 Affected Environment

Field surveys were conducted on eleven separate occasions between April 8, 1998 and December 21, 2000. The surveys determined and recorded the habitat types, presence of wetlands, and the presence or absence of raptors, burrowing owls, small mammals, and kit foxes.

Raptor surveys were conducted by looking for potential roost and nest sites within a 16-kilometer (10-mile) radius of the project area. Active red-tailed hawk nests were found between 3-8 kilometers (2-5 miles) from the project impact area. A migrating group of 25 Swainson's hawks was spotted above a cotton field located on the southeast corner of Grangeville Boulevard and SR 43 (north of the project area).

The project occurs within a movement corridor of the San Joaquin kit fox. Potential dens or burrows within the project impact area were inspected for entrance size, scat, and tracks. Tracking medium was also placed near den entrances and potential crossing areas, however, no sign of kit fox was observed within the project impact area. Caltrans biologists conducted spotlighting surveys throughout a 3.2-kilometer (2-mile) radius of the project impact area. Kit foxes were found during spotlight surveys at four locations near the cities of Visalia and Hanford, approximately 3.2-8 kilometers (2-5 miles) from the project impact area.

One Valley oak (*Quercus lobata*) is located within the footprint of the project and would be removed during construction.

3.11.2 Impacts

Given the proximity of kit fox sightings to the project area and the fact that the project is within the historic range of the kit fox, mitigation for potential impacts to kit fox would be required. Without mitigation, the project may adversely affect kit fox movement across SR 198. Cumulative impacts may result from the Kings and Tulare Counties' urban development plans, which would be facilitated by the improvement of State Route 198. These improvements are discussed in each county's General Plans, and are listed in the Natural Environmental Study.

No substantial effects are anticipated for Swainson's hawk or bats. However, pre-construction surveys would be required.

3.11.3 Mitigation

To minimize potential effects on threatened and endangered species, Caltrans would require the following pre-construction surveys and special provisions for contractors.

3.11.3.1 Swainson's hawk and other raptors

Pre-construction surveys would be conducted to identify potential nest sites occupied by raptors, especially Swainson's hawk. If an active Swainson's hawk nest is found within 0.4 kilometer (0.25 mile) of the impact area, construction activities may be limited with monitoring by a qualified Caltrans biologist. If an active Swainson's hawk nest is found within 1/4 to 1/2 mile of the impact area, a construction monitor will be required during construction. Active Swainson's hawk nests found over 1/2 mile from the impact area will require no monitoring. If an active Swainson's hawk nest is found in a tree that must be removed, a Section 2081 take permit must be obtained and mitigation will be required. However, the current landscaping plan will likely compensate for the potential loss of any identified nesting tree.

Migratory bird special provisions would be included in the Contract Special Provisions.

3.11.3.2 Bats

There is a potential for roosting bats to occur within the project area. Mature trees and structures proposed for removal or modification would need to be inspected for potential roosting bats prior to demolition. If bats are identified within the project area, a contract may be required for their removal. Protection measures for bats would be included in the Contract Special Provisions.

3.11.3.3 San Joaquin Kit Fox

Surveys for kit fox should be undertaken within 30 days prior to the beginning of construction. Surveys would be confined to the project impact area for the purpose of identifying habitat features (such as dens, scat, and tracks) rather than species presence or absence. If habitat features are found during these surveys, appropriate avoidance measures would be implemented. Contract Special Provisions designed to minimize effects to kit fox during construction would be included in the project plans.

In addition to pre-construction surveys, Caltrans will perform other tasks as directed by the United States Fish and Wildlife Service's Biological Opinion. According to the Biological Opinion, the mitigation measure would be the purchase and management of 293 acres of upland habitat as compensation acreage The estimated cost for this

mitigation plan ranges from $800 to $1200 per acre for land acquisition, and $600 per acre for maintenance endowments.

3.11.3.4 Valley Oak

One Valley oak (*Quercus lobata*) located north of SR 198 and east of Road 1 1/2 will be removed as a result of this project. This oak qualifies as a heritage oak and will be mitigated by replacement trees and other native vegetation proposed within the right-of-way following construction.

3.11.3.5 Environmentally Sensitive Areas

Two Environmentally Sensitive Areas, identified during biological surveys, should be avoided during construction. The first is a grove of eucalyptus trees located north of SR 198 and west of Road 68, which serves as a nesting site for raptors. The second is a single Valley Oak *(Quercus lobata)* located adjacent to a proposed frontage road between Road 64 and Road 68. Although measurements were not permitted by the property owner, visual assessments conclude the oak may meet the diameter requirements to qualify as a heritage oak. These areas should not be used for materials or equipment staging.

3.12 Historic and Archaeological Preservation

3.12.1 Affected Environment

The project area is rural agricultural land and the population within the project area consists of dairy and agricultural property owners.

The project area was surveyed for archaeological sites as well as properties that may potentially be eligible for inclusion on the National Register of Historic Places. Seventy-two properties were found to be within or adjacent to the project's area of potential effects (APE). Properties that were not surveyed prior to the preparation of this document must be surveyed after acquisition, but before construction.

3.12.2 Impacts

No prehistoric or historic archaeological sites were identified within or adjacent to the project's APE.

Three properties were identified that had previously been determined not eligible for the National Register of Historic Places. Eighteen properties were formally evaluated and 51 properties were treated under the 1989 Memorandum of Understanding

(MOU) regarding evaluation of post-1945 buildings, moved pre-1945 buildings and altered pre-1945 buildings. The MOU was updated in the interim post-1945 guidelines of July 7, 1997. None of the properties was determined to be eligible for inclusion in the National Register of Historic Places. The Office of Historic Preservation concurred with the findings on July 10, 2000 (Appendix F).

3.12.3 Mitigation

Standard Caltrans procedures require that if previously unidentified cultural resources are encountered during clearing or construction, work will cease in that area until a qualified archaeologist can evaluate the nature and importance of the find. If human remains are exposed during project activities, State Health and Safety Code, Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98.

3.13 Hazardous Waste Sites

Field surveys and record searches were incorporated into an Initial Site Assessment, addressing potential hazardous waste within the project area. Four potential concerns requiring further study were identified: (1) contamination from underground and above-ground petroleum storage tanks, (2) aerially deposited lead from automobile emissions immediately next to the existing highway, (3) lead-based paint and asbestos contamination associated with the four bridges and (4) contamination from pesticides, fuel, oil, grease, and solvents stored on agricultural properties.

3.13.1 Affected Environment

Land use within the project area is rural-residential and agricultural. Existing farming operations include cotton, alfalfa, corn, nectarines, walnuts, and tomato processing. There are also several dairies near the project area.

3.13.2 Impacts

Field surveys and record searches uncovered two parcels where contamination may occur. Additionally, there may be contamination along the roadway from aerially deposited lead and on the bridges because of lead-based paint and asbestos.

3.13.2.1 Petroleum Storage Tanks and Agricultural Operations

There are two parcels where contamination may be present from leaking petroleum storage tanks and chemicals associated with agriculture. These two parcels would require further study to determine if there are any onsite hazardous wastes. Two underground fuel storage tanks have been removed from the former C & L Market, a gas station, at 1074 Lacey Boulevard. Readings from a magnetometer (an instrument used to detect metal objects) suggest that additional tanks may also be present underground. Fuel dispensers and underground piping that are still present onsite would need to be removed according to current regulations.

Adjacent to the abandoned gas station but within current State right-of-way, magnetometer readings showed a possible metal object during field surveys. This object is 4.3 meters (14 feet) long and 1.2 meters (4 feet) wide and is interpreted as a tank. Because the property was acquired by the State in 1934, no records exist that show what this may be. Processes have begun to remove the tank and test the surrounding soil for contamination.

Tri-T Farms at 29630 Road 44 has aboveground tanks that contain agricultural chemicals and diesel fuel. Hardware near the aboveground tanks suggests the presence of an existing underground tank. The parcel also has the potential to contain pesticides, fuel, oil, grease, and solvents that are stored onsite for agricultural operations. Surface staining around oil drums and an oil collection tank suggests that soil contamination has occurred. An onsite sump is a potential source for the accumulation of hydrocarbon, pesticide, and solvent contamination in soil and/or groundwater.

3.13.2.2 Aerially Deposited Lead

Aerially deposited lead from emissions of automobiles that used leaded gasoline formulations (used until the mid-1980s) is a common source of lead contamination in soils next to state highways. Concentrations of lead in excess of lead that may be naturally occurring may be found from one to two feet below the soil surface. These concentrations could also potentially be in excess of the regulatory values allowed for lead. A statistical evaluation of lead samples near SR 198 found an average concentration less than the value established for Caltrans by the Department of Toxic Substance Control. Therefore, reuse of the soil during construction of the project is acceptable.

3.13.2.3 Lead-based Paint and Asbestos

Four bridges in Kings County would be affected by construction of the project. During construction, hazardous materials used in the construction of the bridges may be encountered. "As-built" (engineering) plans were evaluated to determine how existing structures were erected, and to identify the types of materials used. As-built plans and bridge reports reference the use of lead-based paint in the construction of the bridges and guard rails. The as-built plans also note the use of asbestos in the expansion joints. Modification or demolition of these bridges poses a potential health hazard to workers and also the public (if they are exposed). Lead-based paint, used until 1980, may also be found on buildings and houses within the project area. Further analysis and sampling for these materials would occur as part of a Preliminary Site Investigation.

3.13.2.4 Other Possible Contaminates

Other potential hazardous waste issues, including wells and septic tanks, may be discovered during construction of the project. All wells to be abandoned within the project area must be destroyed to prevent groundwater contamination. Proper procedures for destroying domestic and agricultural wells are outlined in the Department of Water Resources Bulletin 74-81 and Bulletin 74-90. Septic tanks would be abandoned as per local requirements.

3.13.3 Mitigation

A Preliminary Site Investigation would be necessary to determine if hazardous wastes are present, and whether or not contamination has occurred. Remediation (clean up) would be required for any hazardous wastes documented in the Preliminary Site Investigation. A notification letter would be submitted to the San Joaquin Valley Air Pollution Control District to obtain permission for bridge demolition at Lakeside Ditch and Highline Canal. The letter must be submitted no less than two weeks and no more than one year prior to demolition of the structures.

3.14 Visual

A Visual Impact Assessment was conducted to evaluate the visual quality of the current (pre-construction) scenery, as well as the proposed (post-construction) scenic modifications, in accordance with Federal Highway Administration guidelines. This report evaluates visual quality by examining visual resources according to three criteria: vividness, intactness, and unity. Vividness is the visual power or

memorability of landscape elements. Intactness refers to the visual integrity of the landscape and its freedom from encroaching elements. Unity is the visual coherence and compositional harmony of the landscape considered as a whole.

3.14.1 Affected Environment

In the early 1920s, the cities of Hanford and Visalia formed a committee and planted walnut trees along both sides of the highway. In the Tulare County section, there are 182 walnut trees consistently spaced 12-15 meters (40-49 feet) apart. This even spacing, combined with the close proximity of the highway to the rows of trees on either side, creates a comfortable, enclosed feeling, or "alley." Tulare County has preserved more of these trees than Kings County, where some of the walnut trees have been replaced by eucalyptus trees, and there are many gaps. Along the Kings County section, there are 44 walnut and 52 eucalyptus trees. Spacing is less consistent, ranging from 15 meters (49 feet) to over 100 meters (330 feet). The total number of trees in the project study area is 278.

Caltrans, with input from local interested parties, completed a Visual Resource Evaluation. Caltrans proposes to widen SR 198 to the north, requiring the removal of all the existing trees on that side of the highway. Using computer simulations, the Visual Impact Assessment evaluated the quality of both pre- and post-construction visual resources from several key viewpoints. These viewpoints contain visual resources typical of various segments of the SR 198 corridor or areas where views are particularly sensitive.

An Historic Architectural Survey Report/Historic Resource Evaluation Report concluded that these trees do not qualify as an historic landscape and would not be eligible for inclusion in the National Register of Historic Places or the California Register of Historic Resources.

3.14.2 Impacts

The Visual Impact Assessment determined that the view from the highway in Tulare County would be the only one that may be affected by the removal of trees.

Figure 3-6 (in Tulare County) represents the experience of driving the highway. The close, even spacing and regular height of the walnut trees links them together as a group, creating a more aesthetically enjoyable driving experience. However, the

proximity of the trees to the highway poses a safety problem because of the narrow recovery area for cars leaving the roadway.

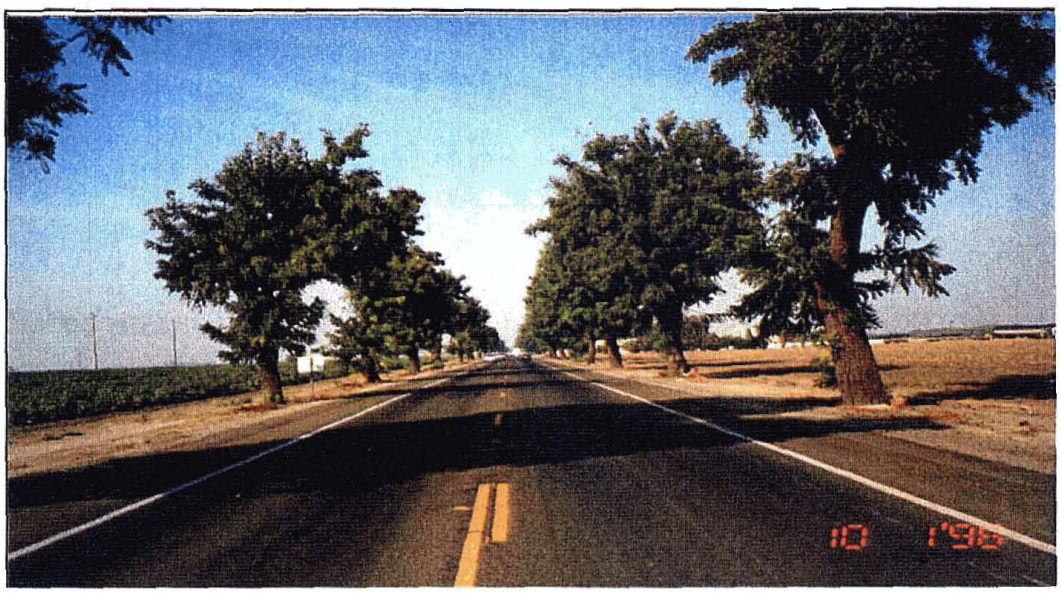


Figure 3-6 Existing view in Tulare County

The simulation in Figure 3-7 shows the completed four-lane expressway segment in Tulare County shortly after construction, illustrating how the driving experience would change when the trees were removed on the north side. The positive visual "alley" setting is lost, but the remaining trees, enhanced by flowers in the median, continue to contribute to the visual quality of the area.

Figure 3-7 Proposed view after construction & before mitigation

3.14.3 Mitigation

Within the Kings County landscape, each individual tree contributes great vividness and contrast. However, the group of walnut trees in Tulare County is the most memorable section of the project area. The proposed tree removal would change the balanced landscape in Tulare County to one dominated by man-made elements. After construction, tree replacement planting is the mitigation recommended to offset this negative impact on visual quality. Over time (approximately 30 years), the planted trees would restore the vividness, balance, contrast, and unity of the project area.

Caltrans recommends planting a mixture of native oak trees along the north side of the expressway for the entire length of the project, and planting to fill in existing gaps on the south side. The new planting would mimic that of SR 198 east of SR 99 and would be watered by a permanent irrigation system to ensure proper growth rates, longevity, and health. The trees would require some time before the visual impacts associated with the project are softened.

Figure 3-8 shows a simulated view that indicates how the north side of SR 198 may look after the trees have reached maturity. The south side would also display a more continuous line of trees. Mitigation measures would not re-create the "alley" effect, but they would soften the visual impacts and create a more aesthetically pleasing experience for drivers and residents.

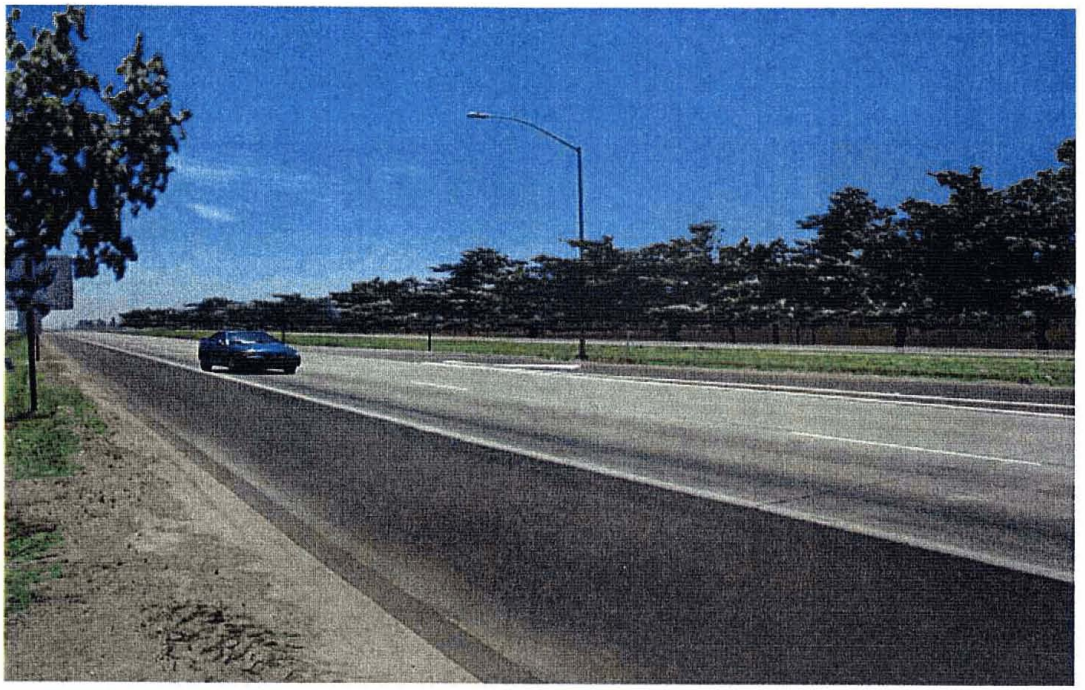


Figure 3-8 Proposed view 30 years after mitigation

Chapter 4 List of Preparers

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DOC 2000 — U.S. Department of Commerce, Bureau of the Census. *2000 Census,* 2000

Appendix A Environmental Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the project. The CEQA impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. Please refer to the following for detailed discussions regarding impacts:

CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulations, Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resource Code, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)

CEQA requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate no impacts. A "no impact" reflects this determination. Any needed discussion is included in the section following the checklist.

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AESTHETICS - Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐
AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	X
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X
BIOLOGICAL RESOURCES - Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	X	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	X	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	X	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	X	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X
COMMUNITY RESOURCES - Would the project:				
a) Cause disruption of orderly planned development?	☐	☐	☐	X

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Be inconsistent with a Coastal Zone Management Plan?	☐	☐	☐	X
c) Affect life-styles, or neighborhood character or stability?	☐	☐	☐	X
d) Physically divide an established community?	☐	☐	☐	X
e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?	☐	☐	☐	X
f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?	☐	X	☐	☐
g) Affect property values or the local tax base?	☐	☐	☐	X
h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines?	☐	☐	☐	X
i) Result in alterations to waterborne, rail, or air traffic?	☐	☐	☐	X
j) Support large commercial or residential development?	☐	☐	☐	X
k) Affect wild or scenic rivers or natural landmarks?	☐	☐	☐	X X
l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours and temporary access, etc.)?	☐	☐	X	☐

CULTURAL RESOURCES - Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	X X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X

GEOLOGY AND SOILS - Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	X

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	☐	X
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv) Landslides?	☐	☐	☐	X
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	X
HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the	☐	☐	☐	X

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
project result in a safety hazard for people residing or working in the project area?				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
LAND USE AND PLANNING - Would the project:				
a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
b) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
NOISE - Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
project expose people residing or working in the project area to excessive noise levels?				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
PUBLIC SERVICES -				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
RECREATION -				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
facilities which might have an adverse physical effect on the environment?				
TRANSPORTATION/TRAFFIC - Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
UTILITIES AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

MANDATORY FINDINGS OF SIGNIFICANCE -

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Appendix B Coordination and Consultation

Coordination and consultation included the following agencies:

NAME	AGENCY	INVOLVEMENT
Terri King	Kings County Association of Governments	Member of Project Development Team
Eddie Wendt	Tulare County Association of Governments	Member of Project Development Team
Mike Edwards	Tulare County Transportation Planning	Member of Project Development Team
David Pendergraft	City of Visalia	Member of Project Development Team
Karl Schoettler	Visalia Beautification Committee	Participated in preparation of Visual Impact Assessment
Brian Zewe	Federal Highway Administration	Transportation Engineer responsible for federal review and approval of project
Daniel Abeyta	Office of Historic Preservation	Reviewed potential impacts to cultural resources and ensured compliance with Section 106 of National Historic Preservation Act
Mike Jeffreys	Natural Resources Conservation Service	Examined impacts to farmland and provided Farmland Conversion Impact Rating
Maryann Owens	U.S. Fish and Wildlife Service	Reviewed potential impacts to endangered species; liaison for formal and informal consultation
Mike Mulligan	California Department of Fish and Game	Reviewed potential impacts to endangered species and 1601 Streambed Alteration Agreement requirements
Mike Jewell	Army Corps of Engineers	Provided consultation for potential wetland impacts and permitting requirements

Appendix C Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5267
FAX (916) 654-6608

July 26, 2000

TITLE VI
POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, sex and national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

Jeff Morales

JEFF MORALES
Director

Appendix D United States Fish And Wildlife Service Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W2605
Sacramento, California 95825

IN REPLY REFER TO:
1-1-00-SP-0507

January 18, 2000

Annette Tenneboe
Department of Transportation
Central Regional Biology Branch
3402 N. Blackstone, Suite 201
Fresno, California 93726

Subject: Species List for Highway 199 Project, King and Tulare Counties, California

Dear Ms. Tenneboe,

We are sending the enclosed list in response to your December 22, 1999 request for information about endangered and threatened species (Enclosure A). The list covers the following U.S. Geological Survey 7½ minute quad or quads: Remnoy, and Goshen.

Please read *Important Information About Your Species List* (enclosed). It explains how we made the list and describes your responsibilities under the Endangered Species Act. Please contact Harry Mossman, Biological Technician, at (916) 414-6650, if you have any questions about the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of Mr. Mossman at this address. You may fax requests to him at 414-6710 or 6711.

Sincerely,

Peter A Cross

for Karen J. Miller
Chief, Endangered Species Division

Enclosures

ENCLOSURE A

Endangered and Threatened Species that May Occur in or be Affected by Projects in the Area of the Following California County or Counties

Reference File No. 1-1-00-SP-0507

January 19, 2000

KINGS COUNTY

Listed Species

Mammals

giant kangaroo rat, *Dipodomys ingens* (E)

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)

Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Birds

California condor, *Gymnogyps californianus* (E)

Aleutian Canada goose, *Branta canadensis leucopareia* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotaphytus) sila* (E)

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

San Joaquin woolly-threads, *Lembertia congdonii* (E)

Hoover's eriastrum (= woolly-star), *Eriastrum hooveri* (T)

California jewelflower, *Caulanthus californicus* (E) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

ENCLOSURE A

Endangered and Threatened Species that May Occur in
or be Affected by Projects in the Selected Quads Listed Below
January 19, 2000

QUAD : 334C GOSHEN

Listed Species

Mammals

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)

Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Birds

Aleutian Canada goose, *Branta canadensis leucopareia* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotaphytus) silа* (E)

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Species of Concern

Mammals

San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

western burrowing owl, *Athene cunicularia hypugea* (SC)

ferruginous hawk, *Buteo regalis* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

American peregrine falcon, *Falco peregrinus anatum* (D)

greater sandhill crane, *Grus canadensis tabida* (CA)

white-faced ibis, *Plegadis chihi* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

southwestern pond turtle, *Clemmys marmorata pallida* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

California linderiella, *Linderiella occidentalis* (SC)

molestan blister beetle, *Lytta molesta* (SC)

Plants

lesser saltscale, *Atriplex minuscula* (SC)*

QUAD : 335D REMNOY

Listed Species

Mammals

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)

Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Birds

Aleutian Canada goose, *Branta canadensis leucopareia* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotephytus) silla* (E)

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Species of Concern

Mammals

San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

western burrowing owl, *Athene cunicularia hypugea* (SC)

ferruginous hawk, *Buteo regalis* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

greater sandhill crane, *Grus canadensis tabida* (CA)

white-faced ibis, *Plegadis chihi* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

southwestern pond turtle, *Clemmys marmorata pallida* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

California linderiella, *Linderiella occidentalis* (SC)

molestan blister beetle, *Lytta molesta* (SC)

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
(*)	*Extirpated*	Possibly extirpated from this quad.
(**)	*Extinct*	Possibly extinct.
	Critical Habitat	Area essential to the conservation of a species.

Reference File No. 1-1-00-SP-0507

Species of Concern

Mammals

San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)
Sierra Nevada red fox, *Vulpes vulpes necator* (CA)
Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
short-nosed kangaroo rat, *Dipodomys nitratoides brevinasus* (SC)
greater western mastiff-bat, *Eumops perotis californicus* (SC)
small-footed myotis bat, *Myotis ciliolabrum* (SC)
long-eared myotis bat, *Myotis evotis* (SC)
fringed myotis bat, *Myotis thysanodes* (SC)
long-legged myotis bat, *Myotis volans* (SC)
Yuma myotis bat, *Myotis yumanensis* (SC)
Southern grasshopper mouse, *Onychomys torridus ramona* (SC)
Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)
San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

Swainson's hawk, *Buteo Swainsoni* (CA)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
greater sandhill crane, *Grus canadensis tabida* (CA)
bank swallow, *Riparia riparia* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugea* (SC)
American bittern, *Botaurus lentiginosus* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
lark sparrow, *Chondestes grammacus* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
Pacific-slope flycatcher, *Empidonax difficilis* (SC)
least bittern, western, *Ixobrychus exilis hesperis* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
long-billed curlew, *Numenius americanus* (SC)
white-faced ibis, *Plegadis chihi* (SC)

rufous hummingbird, *Selasphorus rufus* (SC)

Bewick's wren, *Thryomanes bewickii* (SC)

San Joaquin LeConte's thrasher, *Toxostoma lecontei macmillanorum* (SC)

Reptiles

silvery legless lizard, *Anniella pulchra pulchra* (SC)

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

southwestern pond turtle, *Clemmys marmorata pallida* (SC)

San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylii* (SC)

western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

Kern brook lamprey, *Lampetra hubbsi* (SC)

Invertebrates

Ciervo aegialian scarab beetle, *Aegialia concinna* (SC)

San Joaquin dune beetle, *Coelus gracilis* (SC)

California linderiella, *Linderiella occidentalis* (SC)

molestan blister beetle, *Lytta molesta* (SC)

Doyen's trigonascuta dune weevil, *Trigonoscuta doyeni* (SC)

Plants

forked fiddleneck, *Amsinckia vernicosa var. furcata* (SC)

heartscale, *Atriplex cordulata* (SC)

Lost Hills saltbush, *Atriplex vallicola* (SC)

slough thistle, *Cirsium crassicaule* (SC)

recurved larkspur, *Delphinium recurvatum* (SC)

pale-yellow layia, *Layia heterotricha* (SC) *

TULARE COUNTY

Listed Species

Mammals

giant kangaroo rat, *Dipodomys ingens* (E)

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)

Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)

Sierra Nevada (=California) bighorn sheep, *Ovis canadensis californiana* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Reference File No. 1-1-00-SP-0507

Birds

California condor, *Gymnogyps californianus* (E)

Critical habitat, California condor, *Gymnogyps californianus* (E)

Aleutian Canada goose, *Branta canadensis leucopareia* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotaphytus) sila* (E)

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Critical habitat, little Kern golden trout, *Oncorhynchus (=Salmo) aquabonita whitei* (T)

Little Kern golden trout, *Oncorhynchus (=Salmo) aquabonita whitei* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

California jewelflower, *Caulanthus californicus* (E)

Hoover's spurge, *Chamaesyce hooveri* (T)

Springville clarkia, *Clarkia springvillensis* (T)

Hoover's eriastrum (= woolly-star), *Eriastrum hooveri* (T)

San Joaquin adobe sunburst, *Pseudobahia peirsonii* (T)

San Joaquin woolly-threads, *Lembertia congdonii* (E) *

Greene's tuctoria, *Tuctoria greenei* (E) *

San Joaquin Valley Orcutt grass, *Orcuttia inaequalis* (T) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Plants

Keck's checker-mallow, *Sidalcea keckii* (PE)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Plants

Ramshaw sand-verbena, *Abronia alpina* (C)

Reference File No. 1-1-00-SP-0507

Species of Concern

Mammals

San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)
Sierra Nevada red fox, *Vulpes vulpes necator* (CA)
pale Townsend's big-eared bat, *Corynorhinus (=Plecotus) townsendii pallescens* (SC)
Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
short-nosed kangaroo rat, *Dipodomys nitratoides brevinasus* (SC)
spotted bat, *Euderma maculatum* (SC)
greater western mastiff-bat, *Eumops perotis californicus* (SC)
American (=pine) marten, *Martes americana* (SC)
Pacific fisher, *Martes pennanti pacifica* (SC)
small-footed myotis bat, *Myotis ciliolabrum* (SC)
long-eared myotis bat, *Myotis evotis* (SC)
fringed myotis bat, *Myotis thysanodes* (SC)
long-legged myotis bat, *Myotis volans* (SC)
Yuma myotis bat, *Myotis yumanensis* (SC)
Southern grasshopper mouse, *Onychomys torridus ramona* (SC)
Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)
San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

little willow flycatcher, *Empidonax traillii brewsteri* (CA)
greater sandhill crane, *Grus canadensis tabida* (CA)
bank swallow, *Riparia riparia* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
northern goshawk, *Accipiter gentilis* (SC)
tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugea* (SC)
American bittern, *Botaurus lentiginosus* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
lark sparrow, *Chondestes grammacus* (SC)
olive-sided flycatcher, *Contopus cooperi* (SC)
black swift, *Cypseloides niger* (SC)

hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
Pacific-slope flycatcher, *Empidonax difficilis* (SC)
common loon, *Gavia immer* (SC)
least bittern, western, *Ixobrychus exilis hesperis* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
Lewis' woodpecker, *Melanerpes lewis* (SC)
white-faced ibis, *Plegadis chihi* (SC)
rufous hummingbird, *Selasphorus rufus* (SC)
red-breasted sapsucker, *Sphyrapicus ruber* (SC)
Brewer's sparrow, *Spizella breweri* (SC)
California spotted owl, *Strix occidentalis occidentalis* (SC)
Bewick's wren, *Thryomanes bewickii* (SC)
San Joaquin LeConte's thrasher, *Toxostoma lecontei macmillanorum* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

Kern Canyon slender salamander, *Batrachoseps simatus* (CA)
relictual slender salamander, *Batrachoseps relictus (=pacificus)* (SC)
yellow-blotched ensatina, *Ensatina eschscholtzii croceator* (SC)
Mount Lyell salamander, *Hydromantes platycephalus* (SC)
foothill yellow-legged frog, *Rana boylii* (SC)
mountain yellow-legged frog, *Rana muscosa* (SC)
western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

Kern brook lamprey, *Lampetra hubbsi* (SC)
Volcano Creek golden trout, *Oncorhynchus (=Salmo) mykiss aquabonita* (SC)
Kern River rainbow trout, *Oncorhynchus (=Salmo) mykiss gilberti* (SC)

Invertebrates

San Joaquin tiger beetle, *Cicindela tranquebarica ssp* (SC)
Denning's cryptic caddisfly, *Cryptochia denningi* (SC)
Kings Canyon cryptochian caddisfly, *Cryptochia excella* (SC)
California linderiella, *Linderiella occidentalis* (SC)
Hopping's blister beetle, *Lytta hoppingi* (SC)
moestan blister beetle, *Lytta moesta* (SC)

molestan blister beetle, *Lytta molesta* (SC)
Morrison's blister beetle, *Lytta morrisoni* (SC)
San Emigdio blue butterfly, *Plebulina emigdionis* (SC)

Plants

Kaweah brodiaea, *Brodiaea insignis* (CA)
Greenhorn adobe-lily, *Fritillaria striata* (CA)
Bodie Hills rock-cress, *Arabis bodiensis* (SC)
heartscale, *Atriplex cordulata* (SC)
brittlescale, *Atriplex depressa* (SC)
vernal pool saltbush, *Atriplex persistens* (SC)
scalloped moonwort, *Botrychium crenulatum* (SC)
Shirley Meadows mariposa, *Calochortus westonii* (SC)
recurved larkspur, *Delphinium recurvatum* (SC)
Pierpoint Springs liveforever, *Dudleya cymosa ssp. costafolia* (SC)
Kern River daisy, *Erigeron multiceps* (SC)
mouse buckwheat, *Eriogonum nudum var. murinum* (SC)
Twisselmann's buckwheat, *Eriogonum twisselmannii* (SC)
spiny-sepaled coyote-thistle, *Eryngium spinosepalum* (SC)
Tulare horkelia, *Horkelia tularensis* (SC)
DeDecker's lupine, *Lupinus padre-crowleyi* (SC)
flax-like monardella, *Monardella linoides ssp. oblonga* (SC)
Piute Mountains navarretia, *Navarretia setiloba* (SC)
Twisselmann's nemacladus, *Nemacladus twisselmannii* (SC)
Charlotte's phacelia, *Phacelia nashiana* (SC)
Nine-Mile Canyon phacelia, *Phacelia novenmillensis* (SC)
Sequoia gooseberry, *Ribes tularense* (SC)
valley spearscale, *Atriplex joaquiniana* (SC) *
lesser saltscale, *Atriplex minuscula* (SC) *

Reference File No. 1-1-00-SP-0507

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	Other species of concern to the Service.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
*	*Extirpated*	Possibly extirpated from the area.
**	*Extinct*	Possibly extinct
	Critical Habitat	Area essential to the conservation of a species.

Appendix E Farmland Conversion Impact Rating

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 3/15/01
Name Of Project Route 198 Expressway in Kings and Tulare Cos.	Federal Agency Involved FHWA/Caltrans
Proposed Land Use None	County And State Kings and Tulare Counties, California
PART II *(To be completed by NRCS)*	Date Request Received By NRCS

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply – do not complete additional parts of this form) Yes ☑ No ☐ Acres Irrigated 724,000 Average Farm Size 240

Major Crop(s) Cotton, Alfalfa	Farmable Land In Govt. Jurisdiction Acres: 750,000 % 24	Amount Of Farmland As Defined in FPPA Acres: n/a %
Name Of Land Evaluation System Used California Storie System	Name Of Local Site Assessment System None	Date Land Evaluation Returned By NRCS 3/22/01

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	267.0			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	267.0	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	207.0			
B. Total Acres Statewide And Local Important Farmland	60.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.036			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	n/a			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	76	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use		15			
2. Perimeter In Nonurban Use		10			
3. Percent Of Site Being Farmed		15			
4. Protection Provided By State And Local Government		15			
5. Distance From Urban Builtup Area		n/a			
6. Distance To Urban Support Services		n/a			
7. Size Of Present Farm Unit Compared To Average		10			
8. Creation Of Nonfarmable Farmland		0			
9. Availability Of Farm Support Services		0			
10. On-Farm Investments		10			
11. Effects Of Conversion On Farm Support Services		0			
12. Compatibility With Existing Agricultural Use		0			
TOTAL SITE ASSESSMENT POINTS	160	75	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	76	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	75	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	151	0	0	0

Site Selected: Date Of Selection: Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side) Form AD-1006 (10-83)

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Appendix F Historic Preservation Concurrence Letter

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, Governor
OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

July 10, 2000

Reply To: FHWA000616A

Michael G. Ritchie, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
California Division
980 Ninth Street, Suite 400
Sacramento, CA 95814-2724

Re: Determinations of Eligibility and Effect for the Proposed Widening of State Route 198in Kings and Tulare Counties, CA

Dear Mr. Ritchie:

You have provided me with the results of your efforts to determine whether the project described above may affect historic properties. You have done this, and are consulting with me, in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

The Federal Highway Administration (FHWA) has determined that there are 71 properties within the area of potential effect (APE). Fifty-two properties were treated under the 1989 Memorandum of Understanding (MOU) Regarding Evaluation of Post-1945 Buildings, Moved Pre-1945 Buildings and Altered Pre-1945 buildings, Updated in the Interim Post-1945 Guidelines of July 7, 1997. The three following properties were previously determined not eligible for the National Register of Historic Places:

- Melga Canal
- Bridge #45 005 Kin-198-24.46 Lakeside Canal
- Bridge #45 006 Kin-198-25.17 Cross Creek

The FHWA has also determined that the following properties are not eligible for the NRHP:

- Two rows of black walnut and eucalyptus trees lining Route 198
- 7040 E Lacey Blvd
- Settler's Ditch
- 6165 E Lacey Blvd
- Lakeside Canal
- Highline Canal
- 2141 E Lacey Blvd
- 1074 E Lacey Blvd
- 10130 7th Avenue
- 4421 Avenue 296
- 4592 Avenue 296
- 4708 Avenue 296
- 4984 Avenue 296
- 5506 Avenue 296

M .Ritchie
July 10, 2000
Page 2 of 2

- Southern California Edison Station: Goshen Substation
- 29797 Road 68
- 29966 Road 68

Based on review of the submitted documentation, I have the following comments:

1) The project's area of potential effect (APE) is defined appropriately.
2) The cultural resource studies conducted to date are adequate.
3) None of the properties within the project's APE are eligible for the NRHP.

Since there are no historic properties within the APE, the FHWA could have concluded this consultation with one submittal by including a finding of no historic properties affected" [36 CFR §800.4(d)(1)]. In order to expedite closure of this consultation I will assume that the FHWA has made this finding. If this assumption is incorrect, please advise me within 10 days after receipt of this letter. In the future please explicitly state in your cover letter what your effect determination is.

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 or e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

Daniel Abeyta, Acting
State Historic Preservation Officer

Appendix G Public Participation and Information

Open House (April 21, 1999)

The first Open House/Public Information Meeting was held at Kit Carson Elementary School in the city of Hanford on April 21, 1999. An aerial strip map showing the project alternatives was mounted on one wall. Display boards depicting project costs, schedule, mitigation, and environmental issues were located at one end of the cafeteria. Seventeen Caltrans staff were available to answer questions and address the concerns of 72 local property owners, residents, agency representatives, and members of the news media.

25 comment cards were submitted, focusing on the following issues:

- Impacts to individual residences and businesses
- Tree removal
- Access issues
- Right-of-way acquisition and farmland impacts

Most of the people in attendance supported the project, with a majority favoring construction of a 25.8-meter (85-foot) median. Most also favored tree removal for safety reasons, although a few residents voiced opposition because of their aesthetic value. A majority of those in attendance favored replacement planting for the loss of trees. A few of the farmers, however, voiced opposition to farmland acquisition for the purpose of landscaping.

Open House (August 16, 2000)

A second open house was held at Kit Carson Elementary School on August 16, 2000. This meeting provided the public and any interested parties with updated information regarding the project. Notices were published in the *Hanford Sentinel* and letters of invitation were sent out to federal, state, and local officials as well as 200 local residences and businesses within a one-mile radius of the project. Of the 76 individuals who attended, 23 completed comment cards. These cards, as well as numerous verbal comments received, indicated that maintaining access to homes and businesses was a key concern. Most of the comments fell into the same four categories as those from the first open house.

Public Hearing/Open House (July 10, 2002)

A public hearing was held at Kit Carson Elementary School on July 10, 2002. This meeting provided the public and any interested parties the opportunity to comment on the circulating Draft Environmental Assessment/Initial Study. Notices were published in the Hanford Sentinel, the Visalia Times-Delta, the Tulare Advance Register, and the Lemoore Advance. In addition, letters of invitation were sent out to federal, state, and local officials, as well as local businesses and residents within a one-mile radius of the project. Approximately 43 residents and interested parties attended the public hearing/open house. Three comment cards were submitted at the public hearing, and one letter was received after the public hearing. A court reporter was present, but no comments were offered for transcription. The comments received indicated that access and county road traffic capacity were important issues to property owners.